

## AUTHOR INDEX

### A

- Abbott, W. E., 381, 393, 401  
 Adams, A. E., 57  
 Adams, J. R., Jr., 12  
 Adams, M. A., 333  
 Adams, W. E., 446  
 Adams, W. R., 433  
 Abdon, N. O., 132, 134, 135, 167, 176  
 Abell, R. G., 281, 282  
 Aboim, A. N., 37  
 Abrahamson, E. A., 205  
 Abramson, D. I., 258  
 Abramson, H. A., 634, 637  
 Abreu, B. E., 651, 652  
 Acheson, G. H., 478, 546  
 Adair, F. E., 62  
 Adair, M. E., 329  
 Ades, H. W., 500, 533, 534, 535, 538  
 Adler, F. H., 432  
 Adler, H., 136  
 Adler, H. F., 371, 446, 651  
 Adler, T., 284  
 Adolph, E. F., 381, 382, 383, 384, 386, 387, 391, 392, 396, 400, 421  
 Adolph, E. H., 415  
 Adolf, *see also* Spiegel-Adolf, M.  
 Adrian, E. D., 474, 500, 525, 526, 528, 529, 534, 540, 541, 545, 559, 560, 561  
 Agazzi, C., 183  
 Aird, R. B., 518  
 Ajello, L., 656  
 Allan, J. H., 439  
 Albanese, A. A., 230  
 Albaum, H. G., 129, 365  
 Albers, D., 150  
 Albert, A., 58, 60  
 Alberty, R. A., 339  
 Albright, F., 77, 79, 84, 108  
 Alcalde, *see also* Obrador-Alcalde, S.  
 Alden, R. H., 31, 60  
 Aldrich, C. A., 348  
 Aleksandrov, Ya V., 581  
 Alexander, B., 230  
 Alexander, C. S., 621  
 Alexander, F., 587  
 Alexander, H., 152  
 Alexander, H. A., 171  
 Alexander, J., 632  
 Alexander, L., 409, 415  
 Alexander, R. S., 178, 500, 589  
 Alexander, W. J., 439  
 Aliminosa, L., 226  
 Alkinson, W. B., 60  
 Allen, C. R., 168  
 Allen, F., 120  
 Allen, F. M., 285, 286  
 Allen, F. M. B., 387  
 Allen, S. C., 371, 443  
 Allen, W. F., 527, 529, 534  
 Allen, W. J., 259  
 Allen, W. L., 431  
 Allen-William, G. M., 257  
 Alm, T., 586  
 Almasy, F., 588  
 Almon, L., 636, 639  
 Alpdogan, F., 446  
 Alsdon, S. R., 439  
 Alt, H. L., 369, 430  
 Altamirano, M., 132  
 Althausen, T. L., 588  
 Altschule, M. D., 309  
 Alvarez, W. C., 196  
 Alving, A. S., 226, 245, 433  
 Amadeo, J. A., 307  
 Ambache, N., 214  
 Ambard, D., 174  
 Amberson, J. M., 657  
 Ambrose, A. M., 443  
 Amdur, M. O., 110  
 Amler, M. H., 106  
 Ammundsen, E., 358  
 Ananieva, G. G., 445  
 Andereggen, P., 177  
 Andersch, M. A., 365  
 Anderson, C. R., 659  
 Anderson, D. P., 259, 431  
 Anderson, E., 290  
 Anderson, E. H., 30, 611  
 Anderson, G. W., 72  
 Anderson, M., 654, 655  
 Anderson, M. M., 652, 654, 655  
 Anderson, O. D., 570, 575, 576  
 Anderson, R., 540  
 Anderson, T. F., 20, 632, 636  
 Andervont, H. B., 623  
 Andjob, V., 285  
 Andres, G., 34  
 Andresen, N., 28  
 Andrews, C. H., 660  
 Andrews, F. N., 73  
 Andrews, H. L., 658  
 Andrews, J. C., 643  
 Andrews, R. J., 159  
 Angel, P., 31, 36  
 Anglem, T. J., 74  
 Anigstein, L., 423, 660  
 Anrep, G. V., 142  
 Anson, B. L., 164  
 Antos, R. J., 283, 286  
 Apperly, F. L., 289  
 Applegarth, A. P., 75  
 Appleton, J. E., 77  
 Apter, J., 546  
 Apter, J. T., 500  
 Arbesman, C. E., 654  
 Archibald, R. M., 89, 231, 262, 280  
 Ardenne, M. V., 127  
 Arellano, Z. A. P., 431  
 Arhimo, E., 589  
 Aries, L. J., 103  
 Aring, C. D., 548  
 Arisz, W. H., 589  
 Armand, Y., *see also* Jacquot-Armand, Y.  
 Armstrong, C. D., 630  
 Armstrong, S. H., Jr., 246, 327, 329, 331, 336, 349, 350, 632, 640  
 Armstrong, W. D., 106, 108, 164  
 Arnaud, R., 657  
 Arnolt, R. I., 642  
 Arosto, F., 30  
 Arrhenius, S., 638  
 Arshavski, I. A., 429  
 Arvanitaki, A., 464, 465, 473, 474, 484, 485, 486, 494, 495, 497  
 Arzac, J. P., 53  
 Ashman, R., 310, 313  
 Ashworth, C. T., 243  
 Ashworth, J. N., 329, 343, 344, 345, 349  
 Askey, J. M., 273, 317, 442  
 Asling, C. W., 75  
 Asmussen, E., 150, 151, 152, 153, 239, 366, 367, 369, 422  
 Aste-Salazar, H., 369  
 Astrachan, G. D., 641  
 Astwood, E. B., 70, 71, 72

Astwood, E. B., 52, 69  
 Atchley, D. W., 591  
 Atherton, R. G., 423  
 Atkinson, A. J., 651  
 Atkinson, L. N., 63  
 Atkinson, W. B., 60, 62  
 Aub, J. C., 71, 284  
 Auerbach, C., 605  
 Auerbach, R. W., 285, 446  
 Aurell, G., 125  
 Austin, A. T., 594  
 Austin, R. S., 316  
 Avery, N. L., 401  
 Avery, O. T., 612, 635  
 Aymon, G., 150  
 Ayre, J. E., 662  
 Ashley Montagu, M. F., 53  
 Aschheim, S., 61  
 Aschoff, J., 256  
 Ascione, R., 35  
 Asdell, S. A., 51, 53  
 Ashburn, L. L., 74, 316  
 Ashby, M. C., 519  
 Ashby, W., 364  
 Ashe, W. F., 382, 391, 392, 418  
 Ashkenaz, E. W., 126  
 Ashley, F. L., 164

## B

Babitsky, P. S., 564  
 Babkin, B. P., 314, 570  
 Bach, L. M. N., 176, 272  
 Baci, I., 179  
 Bacq, Z. M., 459  
 Bachrach, E., 304  
 Bachrach, W. H., 206  
 Bacsich, P., 28, 55, 113  
 Bader, M. N., 660  
 Bagchi, B. K., 519  
 Baggenstoss, A. H., 310  
 Bahke, A. M., 343  
 Bailey, C. C., 89, 92  
 Bailey, E., 84  
 Bailey, J. R., 371, 432  
 Bailey, K., 128  
 Bailey, O. T., 92, 331, 332, 333, 336, 346, 347, 348  
 Bailey, P., 534, 535  
 Bainfield, W. F., 195  
 Baisset, A., 152  
 Baker, B. L., 57, 75  
 Baker, H. L., Jr., 302  
 Bakker, A., 363  
 Bakuradze, A., 499  
 Balboni, V. G., 284

Baldes, E. J., 420  
 Baldwin, E. D., 275, 308, 347, 363  
 Ballentine, R., 582  
 Ballin, H. M., 385, 516  
 Ballou, G. A., 349, 350  
 Banerjee, S., 90, 91  
 Banerjee, S. R., 89  
 Banner, A. H., 433  
 Banuelos, M., 256  
 Barach, A. L., 371, 372, 433, 434, 439  
 Barach, B., 371, 433  
 Barbey-Gampert, M., 165  
 Barbour, I., 520  
 Barcham, I., 207  
 Barclay, J. A., 396  
 Barcroft, H., 169, 258, 259, 275, 286, 431  
 Barcroft, J., 59, 69, 193, 315, 374, 375, 430  
 Bard, P., 526, 530, 539  
 Bardier, A., 175  
 Barker, D. E., 388  
 Barker, F. E., 595  
 Barker, G. R., 662  
 Barker, S. B., 71  
 Barnes, A. R., 312, 318  
 Barnes, T. C., 517, 489  
 Barnes, V. R., 199  
 Barnum, C. P., 106  
 Baronofsky, I. D., 174, 209  
 Barrera, S. E., 517, 520  
 Barrojo Moguel, R., 302  
 Barron, D. A., 497, 498  
 Barron, D. H., 1, 19, 59, 375, 464, 467  
 Barron, E. S. G., 128, 374, 664  
 Barsoum, G. S., 134, 142  
 Bartelmez, G. W., 51, 52  
 Barth, L. G., 33, 38  
 Bartler, F. C., 246  
 Bartlett, A. G., 310  
 Bartolazzi, C., 35  
 Barton, M., 52  
 Barton-Wright, E. C., 615  
 Basoglu, M., 446  
 Bassett, D. L., 261, 285, 500, 510, 514, 531  
 Bastenie, P. A., 216  
 Bastouil, R., 152  
 Batchelder, A. C., 346, 348  
 Bateman, J. B., 446, 581, 590  
 Batterman, R. C., 310  
 Baud, A., 304

Bauer, R. O., 651  
 Bauld, W. A. G., 662  
 Baum, H., 317  
 Baum, W. S., 432  
 Baumberger, J. P., 358  
 Baumann, C. A., 630, 642  
 Baumann, E. J., 73  
 Baumann, L., 41  
 Bavetta, L. A., 588  
 Bay, E. B., 433  
 Bayley, R. H., 312  
 Baylor, M. R. B., 20  
 Bayne, T. L., 569  
 Baxter, J., 235  
 Baxter, J. H., 243  
 Bazett, H. C., 271  
 Bazin, S., 589  
 Beach, F. A., 53  
 Beadle, G. W., 613  
 Beament, J. W. L., 391  
 Bean, J. W., 436  
 Bean, W. B., 382, 391, 392, 418  
 Bear, R. S., 126  
 Beard, D., 636  
 Beard, J. W., 633, 636  
 Beaton, L. E., 182, 546  
 Beaudette, F. R., 661  
 Beck, E. M., 641  
 Beck, M. D., 661  
 Beck, W. C., 563  
 Becker, H., 596  
 Becker, R. F., 430  
 Becks, H., 75, 103, 107, 108  
 Beckman, W. G., 370, 440  
 Bedford, T., 417  
 Beecham, H. K., 310  
 Beecher, H. K., 285, 347, 358  
 Begg, M., 624  
 Behnke, A. R., 369, 439  
 Behnke, J., 634, 637  
 Behrens, T., 243  
 Behrmann, V. G., 285, 363  
 Beland, E., 244  
 Belding, H. S., 153, 392, 417, 422, 438, 439  
 Bell, G. H., 112  
 Bell, J. C., 80  
 Bell, J. W., 318  
 Bell, T. T., 614  
 Bellis, C. J., 264  
 Bender, M. B., 528, 532, 562  
 Benedict, E. R., 196  
 Benjamin, J. A., 643  
 Benmosche, M., 20

- Bennett, H. S., 261, 285  
 Bennett, L. L., 75, 78, 86, 87, 243  
 Bennett, M. A., 8  
 Benoit, J., 105, 108, 109  
 Benoit, M., 194  
 Benson, R. E., 213  
 Benua, R. S., 61  
 Berg, B. M., 199  
 Berg, C. J., 78  
 Berg, M., 195, 363  
 Berg, W. E., 290  
 Bergeim, O., 195  
 Bergeron, G., 142, 279, 283, 286  
 Bergman, H. C., 279, 281, 285, 286, 422  
 Bergstrand, H., 242  
 Bernhard, C. G., 464  
 Bering, E. A., Jr., 332, 333, 336  
 Beritoff, J., 477, 497, 499, 500  
 Berk, H. T. J., 247  
 Berkman, J. M., 209  
 Berliner, R. W., 226  
 Berman, M., 478, 489  
 Berman, R. L., 657  
 Berman, S., 22, 54  
 Bernfeld, P., 483, 592, 594  
 Bernhard, C. G., 494, 500, 547  
 Bernheim, F., 234, 237, 642  
 Bernheim, M. L. C., 234, 237, 642  
 Bernstein, R., 169, 273  
 Bernsten, A., 306  
 Bernthal, T., 272  
 Berryman, G. H., 155, 313  
 Bertoli, R., 583  
 Bertrand, I., 546  
 Bessey, O. A., 111  
 Best, C. H., 85  
 Beswick, W. F., 557  
 Beutner, R., 306, 489  
 Bevelander, G., 35, 74, 106  
 Bey, G., 237, 238, 239  
 Beyer, E., 343  
 Beyer, K. L., 229, 230  
 Beyne, J., 237, 238, 239, 432  
 Biasotti, A., 91  
 Bichthal, F., 153  
 Bickerman, H. A., 371  
 Biddulph, C., 56  
 Bielschowsky, F., 73  
 Bielschowsky, M., 129  
 Bierman, W., 656  
 Bigelow, N., 557, 558  
 Bigham, R. S., 84  
 Billig, H. E., 464  
 Bing, H. I., 415  
 Bing, R. J., 235, 289, 309  
 Binger, C. A. L., 366  
 Binger, G., 430  
 Binkley, F., 128, 639  
 Birchall, R. F., 216  
 Birge, R. F., 167  
 Birren, J. E., 433  
 Bischoff, F., 85  
 Bishop, D. H., 56  
 Bishop, G. H., 478, 482, 494, 497, 525, 533, 553, 554, 557, 558, 559, 560, 561, 563, 564  
 Biskind, G. R., 643  
 Biskind, M. S., 643  
 Bittner, J. J., 623  
 Bjarke, T., 134, 135  
 Bjergaard, *see also* Peder-  
 sen-Bjergaard, K.  
 Björkman, G., 200  
 Björnesjö, K. B., 637  
 Black, D. A. K., 387  
 Black, E. C., 375  
 Black, V. S., 375  
 Black, W., 152  
 Blackwood, F. C., 361  
 Blair, E. A., 474, 485, 488, 494  
 Blair, H. A., 167, 278, 304, 306, 307  
 Blakemore, F., 110  
 Blalock, A., 232, 303  
 Blanc, R., 608  
 Blanchard, M. H., 329  
 Bland, E. F., 310  
 Blandau, R. J., 22  
 Blankenhorn, M. A., 316  
 Blaubaum, P. E., 211, 212  
 Blaxter, K. L., 69  
 Blicke, F. F., 651  
 Blinks, L. R., 290  
 Bliss, C. I., 36  
 Bliss, C. I., 624  
 Bliss, H. S., 30  
 Blix, G., 113  
 Block, E. H., 283  
 Blood, F. R., 304, 371, 429  
 Bloomberg, W., 519  
 Bloomfield, A. L., 302, 630  
 Bloomfield, R. A., 277, 319, 448  
 Bloomfield, S., 176  
 Blum, G., 104  
 Blum, H. F., 419  
 Blum, J., 586  
 Blumberg, H., 9  
 Blumgart, H. L., 318  
 Boas, E. P., 318  
 Bodansky, O., 365  
 Bodian, D., 540, 546  
 Bodine, J. H., 30  
 Bodlander, J., 310  
 Boelaert, R., 441  
 Boell, E. J., 19, 29  
 Boelter, M. D. D., 111  
 Boettiger, E. G., 230, 238, 401  
 Bogen, H. J., 581  
 Bohlmann, A., 586  
 Bohnhoff, M., 612  
 Boivin, A., 635  
 Boje, O., 153  
 Bollman, J. L., 88, 129  
 Bond, A., 159  
 Bond, G., 317  
 Bondarchuk, A. V., 564  
 Bonner, J. F., 106  
 Bonnet, V., 498  
 Bonsnes, R. W., 228  
 Bonvallet, M., 585, 586  
 Boone, B. R., 319  
 Booth, V. H., 364  
 Boothby, W. M., 370, 431, 444  
 Borchardt, P. R., 304, 311  
 Bordet, J., 637  
 Bordley, J., 3rd., 228, 401  
 Borglin, N. E., 134, 167  
 Borkovic, E. J., 361  
 Bose, A. N., 641, 658  
 Bosma, J. F., 537  
 Botha, J. F., 157  
 Bott, P. A., 227  
 Boucher, R. V., 110  
 Bouckaert, J. J., 442  
 Bougiovanni, A. M., 289  
 Bouman, H. D., 139  
 Bourland, J. W., 60  
 Bourne, G., 104, 106, 107  
 Bourque, J. E., 654  
 Bouvet, W., 371  
 Bovet, D., 653, 654, 655  
 Bowden, R. E. M., 141  
 Bowditch, S., 518  
 Bowers, E., 278  
 Boyd, E. M., 401  
 Boyd, L. G., 201  
 Boyd, L. J., 310, 654  
 Boyd, T. E., 277, 307, 309, 445

- Boyd, W. C., 631, 634, 636, 637, 638  
 Boyer, P. D., 349, 350  
 Boyland, E., 661  
 Boyle, P. E., 112  
 Boyle, P. J., 129, 131, 590  
 Bozler, E., 198, 213, 501  
 Brachet, J., 19, 20, 24, 28, 29, 34  
 Bradbury, J. T., 52  
 Braden, S., 540  
 Bradley, G. P., 264  
 Bradley, S. E., 242, 264, 280, 289, 309, 347  
 Brady, F. J., 658  
 Brahammer, N. S., 195  
 Brahmachari, H. D., 87  
 Brams, W., 302  
 Brand, E., 349  
 Brannon, E. J., 308, 309  
 Brannon, E. S., 170, 275, 280, 286, 347  
 Brasseur, H., 105  
 Brassfield, C. R., 134, 195, 363, 440, 489  
 Brauer, R. W., 345  
 Braun, K., 63, 318  
 Braun, W., 611  
 Bray, H. G., 113  
 Brazier, M. A. B., 139, 515, 517, 519, 520  
 Breed, E. S., 280, 308, 347, 363  
 Breen, J., 593  
 Bregnoli, C., 584  
 Breinl, F., 632, 633  
 Bremer, G., 462, 464, 466, 467, 468, 469, 470, 472, 473, 474, 498  
 Bretschneider, L. H., 23, 36  
 Brian, P. W., 657  
 Bricker, J. W., 433  
 Bridge, E. V., 439  
 Bridgman, W. B., 339  
 Briggs, R., 2, 6, 11, 35  
 Brigham, W. C., 218  
 Brimhall, B., 615  
 Brink, F., Jr., 358, 439, 474, 485, 493  
 Brink, N. G., 78  
 Brink, R. A., 617  
 Brinkhous, K. M., 336  
 Brisbin, G. W. F., 120  
 Britton, S. W., 84, 372, 440, 429  
 Brobeck, J. R., 422  
 Broch, O. J., 237  
 Brodal, A., 543, 544  
 Brodie, D. C., 178, 434  
 Brody, S., 19, 20, 76, 182, 436  
 Brofman, B. L., 285  
 Brolin, S. E., 58, 175  
 Broman, L., 23, 24  
 Broman, T., 584  
 Broman, *see also* Lundberg-Broman, A. M.  
 Bromberg, M., 63  
 Bronk, D. W., 177, 435, 470, 474, 485, 493, 507  
 Bronstein, B., 230, 630  
 Brontman, M., 308, 445  
 Brookes, R. D., 372, 434  
 Brookhart, J. M., 277, 307, 309, 445  
 Brooks, A. A., 508, 520  
 Brooks, C. F., 446  
 Brooks, C. McC., 181  
 Brooks, M. M., 27  
 Brooks, S. C., 595  
 Broom, W. A., 314  
 Brother, G. M., 343  
 Brouha, L., 153, 155  
 Brousseau, D., 657  
 Brown, A., 345, 348, 360  
 Brown, A. M., 637  
 Brown, B. R., 438  
 Brown, D., 314  
 Brown, D. E. S., 484  
 Brown, E., 275, 310  
 Brown, E. B., Jr., 371, 432, 439  
 Brown, G. B., 7  
 Brown, H., 170, 171, 260, 289  
 Brown, J. D., 401  
 Brown, M. V., 134, 459, 478  
 Brown, W. E., 52  
 Brown, W. O., 12  
 Brown *see also* Denny-Brown, D.  
 Browne, J. S. L., 79, 84, 240  
 Broyles, E. N., 656  
 Brozer, J., 157  
 Bruckmann, G., 90  
 Brues, A. M., 242, 284, 592  
 Brues, M. C., 242  
 Bruesch, S. R., 183  
 Brüger, M., 179  
 Bruhl, W., 434  
 Brummer, P., 245  
 Brun, C., 230, 238, 239, 384, 395, 396  
 Brunand, M., 215  
 Bruner, H. D., 260, 263  
 Bruner, J., 56  
 Brunschwig, A., 199, 219  
 Bruah, H. V., 104, 109  
 Bryan, A. H., 433  
 Brzezinski, A., 63  
 Bucher, G. R., 200  
 Bucher, K., 272, 441, 443  
 Bucher, O., 113  
 Bucher, V., 179  
 Buchthal, F., 120, 121, 122, 123, 124, 125, 127, 128, 129, 133, 138, 139, 256, 462, 473, 540  
 Buckley, W. E., 207  
 Buchwalk, K. W., 77  
 Budd, V., 582  
 Budinger, F., 564  
 Bueding, E., 518  
 Bugge, C. W., 230, 630  
 Buie, R. M., Jr., 311, 314  
 Bulbring, E., 132, 133, 652  
 Bulger, H. A., 226, 395  
 Bull, H. B., 654, 655  
 Bullen, A. K., 82  
 Bullock, T. H., 458, 485, 490, 491, 492, 497, 507  
 Bunde, C. A., 315  
 Bunn, P. A., 194  
 Burch, A. B., 34  
 Burch, G. E., 273, 274, 303, 309, 310, 389, 390, 392, 422, 445  
 Burchell, H. B., 653  
 Burdette, W. J., 281, 315  
 Burdick, H. O., 61  
 Bürgi, E., 581  
 Burke, B. S., 62  
 Burke, V., 37  
 Burn, I., 399  
 Burn, J. H., 92, 176, 399, 478  
 Burnet, F. M., 629, 630, 632, 640  
 Burnett, C. H., 310  
 Burns, H. L., 447  
 Burns, R. K., Jr., 36, 57  
 Burrill, D. Y., 195  
 Burrill, M. W., 237, 239, 393, 394  
 Burstrom, H., 597  
 Burt, R. L., 105  
 Bushey, M. S., 388, 595  
 Bushland, R., 660  
 Butler, A. M., 77, 387, 395  
 Butler, G. C., 644



Butt, H. R., 209  
 Butts, J. S., 371, 433  
 Buxbaum, H., 310  
 Byer, F. T., 229, 313, 589  
 Byerrum, R. U., 666  
 Bywater, W. G., 72  
 Bywaters, E. G. L., 242, 393

## C

Cabanes, R., 108  
 Cahen, R. L., 79  
 Cahill, W. M., 109  
 Cahuzac, M., 174, 175  
 Cain, J. C., 318  
 Calandra, J. C., 195  
 Caldwell, M. J., 62  
 Calhoun, L., 622  
 Calleja, A., 239  
 Calloway, J. L., 518  
 Cameron, A., 655  
 Cameron, A. T., 63  
 Cameron, G., 589  
 Cameron, H. C., 112  
 Cameron, J. W., 334, 335, 336, 338, 339, 340, 350  
 Cammaroti, M. S., 8  
 Campbell, B., 465, 488, 500, 547, 661  
 Campbell, D. H., 192, 633, 634, 637, 638  
 Campbell, E. J. M., 278  
 Campbell, G. F., 328  
 Campbell, I. J., 108  
 Campbell, J., 129  
 Campbell, J. A., 371  
 Canabal, E. J., 168  
 Cannon, P. R., 633  
 Cannon, W. B., 459, 469, 472, 547  
 Cantarow, A., 73, 83  
 Canzanelli, A., 71, 91, 283, 284  
 Capet, A., 239  
 Caravati, C. M., 201  
 Caroline, L., 345  
 Card, L. E., 621  
 Cardot, H., 485, 497  
 Carlborg, U., 255  
 Carlson, J. G., 28  
 Carlsten, A., 415  
 Carmichael, E. B., 206  
 Carmichael, H. T., 433  
 Carmichael, J., 63  
 Carmody, J. T. B., 182  
 Carnes, W. H., 108, 591  
 Carpenter, C. P., 642  
 Carpenter, T. M., 89

Carr, C., 596  
 Carr, C. W., 388, 594, 595  
 Carr, D. T., 443  
 Carral, R., 313  
 Carrea, R. M. E., 543  
 Carrick, L., 656  
 Carroll, E., 79  
 Carroll, W. R., 401  
 Carryer, H. M., 653, 654, 655  
 Carryett, R. A., 77  
 Carter, S. J., 212  
 Cary, M. K., 289  
 Cary, W. E., 633  
 Case, T. J., 433, 517  
 Caso, A., 165  
 Caspari, E., 607  
 Caspersson, T., 123  
 Castex, M. R., 256  
 Castiglioni, R., 30  
 Castillo, E. B. Del., 82  
 Catcheside, D. G., 609  
 Catchpole, H. R., 290, 437  
 Caujard, R., 393  
 Caujolle, F., 215  
 Caullery, M., 51  
 Cavanaugh, J. W., 73  
 Cavier, R., 216  
 Cederquist, D., 360  
 Cerletti, A., 169, 258, 259  
 Cerny, A., 592  
 Cessieux, H., 205  
 Chadwick, L. E., 371, 439, 444  
 Chaikoff, I. L., 9, 70, 71, 211, 585  
 Chailley, H., 583  
 Chamber, J. W., 112  
 Chambers, G. H., 398  
 Chambers, L. A., 632, 636  
 Chambers, R., 81, 265, 281, 282, 285, 584, 589  
 Champy, C., 165  
 Chance, G. Q., 166, 171, 565  
 Chandler, J. P., 7  
 Chang, H. C., 134  
 Chang, H. T., 537, 547, 597  
 Chang, M. C., 22, 55  
 Chang, W. K., 620  
 Chantrenne, H., 24  
 Chapman, C. W., 641  
 Chapman, D. W., 317  
 Chapman, E. M., 74  
 Chapman, W. P., 173, 209, 558, 561  
 Chardon, G., 195, 239  
 Charipper, H. A., 35, 61, 74, 434  
 Chase, H. F., 651  
 Chase, J. H., 83, 633  
 Chasis, H., 226, 287, 288, 289, 309  
 Chen, G., 305, 318, 643, 657  
 Chen, K. K., 91, 175, 651  
 Chen, S.-L., 615, 616  
 Cheney, R. H., 28, 286  
 Cheng, C. P., 214  
 Chenyakaeva, E. Y., 364  
 Chesler, A., 90  
 Chesley, L. C., 381  
 Chess, D., 283, 654, 655  
 Ches, S., 283  
 Chesterman, J. T., 173  
 Chick, H., 327  
 Chickering, O., 653, 654  
 Child, C. M., 29  
 Chinn, H. I., 438  
 Chiray, M., 192  
 Chitre, R. G., 112  
 Chlenov, L. G., 564  
 Choh Hao Li, 290  
 Chornock, C., 110  
 Christensen, B. C., 440  
 Christensen, E. H., 150, 422  
 Christensen, H., 239  
 Christensen, H. N., 72  
 Christensen, L. R., 337  
 Christansen, S., 415  
 Chu, F., 638  
 Chu, J. P., 59  
 Chu, W. C., 194  
 Cicardo, V. H., 168, 284, 306, 313, 516  
 Ciereszko, L. S., 71  
 Cipolla, E., 260  
 Cislser, L. E., 313  
 Citterio, P., 36  
 Claggett, O. T., 88  
 Clark, D. M., 78  
 Clark, E., 630, 640  
 Clark, E. L., 113  
 Clark, E. R., 113  
 Clark, G. L., 20  
 Clark, H. C., 653  
 Clark, R. T., Jr., 371, 432  
 Clark, W. G., 432, 588  
 Clarke, B. G., 219  
 Clarke, D., 154, 157, 240  
 Clarke, D. A., 237  
 Clarke, E. C., 247  
 Clarke, H., 349  
 Clarke, R. W., 430  
 Claude, A., 24

- Clavert, J., 105, 108, 109  
 Clemmessen, S., 138, 473, 540  
 Clifton, C. E., 35  
 Clinton, M., Jr., 434  
 Clough, W. J., 657  
 Clowes, G. H. A., 282  
 Clute, H. M., 74  
 Cluver, E. H., 157, 158  
 Coates, C. W., 134, 459, 478, 489, 492  
 Cobb, C. A., Jr., 331  
 Cobb, D. M., 129, 130  
 Cobb, S., 519  
 Cobb, W. A., 511  
 Code, C. F., 420, 653, 654, 655  
 Cogan, D. G., 588  
 Coggeshall, L. T., 657  
 Cogswell, R. C., 155, 313  
 Cohen, D. L., 358  
 Cohen, S., 630  
 Cohen, S. J., 135  
 Cohen, S. L., 440  
 Cohn, C., 372  
 Cohn, E. J., 327, 329, 343, 344, 345, 349, 402, 631, 632, 640  
 Cohn, M., 7  
 Cohn, R., 508, 509, 511, 515, 518  
 Cohn, T. D., 207  
 Cohn, W. E., 592  
 Colcher, H., 245  
 Cole, F., 174, 209  
 Cole, H. H., 54, 61  
 Cole, K. S., 460, 478, 479, 481  
 Cole, L. J., 620  
 Cole, W. H., 213, 283  
 Coley, B. L., 12  
 Collander, R., 581, 589, 596  
 Collard, A., 167  
 Colle, G., 462  
 Collem, M. F., 194  
 Collen, M. F., 207  
 Collier, F. A., 285, 384, 387  
 Collet, J., 106  
 Collin, R., 238  
 Collings, W. D., 170, 279, 287, 288  
 Collins, M. C., 589  
 Collip, J. B., 108  
 Cologne, R., 243  
 Colovos, G. C., 621  
 Colowick, S. P., 85  
 Combe, P., 657  
 Comfort, M. W., 88, 210, 213  
 Compere, E. L., 104  
 Comroe, J. H., Jr., 358, 366, 374, 437, 442, 447  
 Conley, C. L., 382, 422  
 Conn, J. W., 88, 239, 392, 421  
 Connor, C. L., 9  
 Consolazio, F., 421  
 Consolazio, F. C., 383, 386  
 Consolazio, W. V., 362, 366, 382  
 Conway, E. J., 129, 130, 131, 200, 236, 590, 591, 592, 593, 596  
 Cook, E. V., 361  
 Cook, S. F., 158, 439  
 Cooke, W. T., 217, 230, 396  
 Cooper, B. M., 168  
 Cooper, D. C., 617  
 Cooper, K. W., 28, 290  
 Cooper, R. S., 38  
 Cope, O., 71, 586  
 Copenhaver, W. M., 167  
 Copp, D. H., 104  
 Coppee, G., 133, 463, 465, 474  
 Corcoran, A. C., 226, 242, 280, 287  
 Cordsen, M., 385  
 Cori, C. F., 85, 86, 128  
 Cornatzer, W. E., 643  
 Corner, G. W., 51  
 Cornman, I., 28  
 Corre, L., 383  
 Cortell, R., 183  
 Corwin, W., 371  
 Cosby, R. S., 265, 276, 278  
 Costello, D. P., 31, 32  
 Cotton, F. S., 271  
 Cottrell, J. D., 311  
 Co Tui, F. W., 207, 246  
 Couadau, 273  
 Coujard, C., 165  
 Coujard, R., 165  
 Coulston, F., 622  
 Cournand, A., 263, 273, 275, 280, 308, 319, 347, 363  
 Courier, R., 51, 57, 71  
 Courtice, F. C., 286, 371, 402  
 Couteaux, R., 459, 492  
 Cowen J., 416  
 Cowie, A. T., 62, 74, 375  
 Cowie, D. B., 658  
 Cowies, R. B., 424  
 Cox, A. J., 199  
 Cox, L. B., 182  
 Cox, R. T., 134, 459, 478  
 Cox, T. J., 205  
 Cox, W. W., 365  
 Crabtree, H. G., 661  
 Craig, F. N., 69, 229, 237, 358, 393  
 Cramer, W., 587  
 Crampton, J., 235  
 Crar, C. W., 483  
 Crausaz, R., 443  
 Crawford, B., 226  
 Crepy, O., 61  
 Crescitelli, F., 178, 260, 305, 458, 490  
 Cress, C. H., 516  
 Crocker, P. L., 371, 432  
 Croft, P. G., 136  
 Cronkite, E. P., 336  
 Crook, C. E., 285  
 Crossman, L. W., 286  
 Crouse, H., 609  
 Croxatto, H., 233  
 Croxatto, R., 233  
 Cruck, S., 239  
 Crutcher, R. R., 171  
 Cruvant, B. A., 518  
 Cruikshank, E. W. H., 307, 319, 445  
 Cserveny, J., 588  
 Culbertson, J. T., 657, 658  
 Culinier, A., 52  
 Cullen, C. H., 166, 171, 565  
 Cullen, S. C., 172, 361  
 Cummins, G. M., 207  
 Curry, J. J., 264  
 Curtis, G. M., 70  
 Curtis, H. J., 460, 478, 479, 481, 541  
 Curtis, M. R., 623  
 Cureton, T. K., 156  
 Cushing, J. E., Jr., 639  
 Custer, M. D., 209  
 Cuthbertson, D. P., 84  
 Cutting, W. C., 194  
 Czebrinski, E. W., 263

## D

- Dacie, J. V., 285  
 Daft, F. S., 74  
 Dainty, M., 127  
 Dalco, M. A., 31  
 Dalco, A., 19  
 Dale, H. D., 135

- Dallemagne, M. J., 103, 104, 105  
 Dallenbach, K. M., 553  
 Daly, I. De Burgh., 263  
 Damodaran, M., 25  
 D'Amour, F. E., 255, 304, 371, 429  
 Dana, E., 228  
 Dandy, W. E., 548  
 Danforth, C. H., 607, 608, 613, 624  
 D'Angelo, S. A., 369, 371, 393, 394, 432  
 Daniel, J. F., 23  
 Danielli, J. F., 20, 107, 193, 402, 581, 585, 586, 588, 609, 664  
 Danielli, M., 664  
 Danielopolu, D., 176  
 Danowski, T. S., 72, 286, 382, 386, 387, 402, 587  
 Darby, W. J., 194  
 Darcy, D. A., 30  
 Darling, R. C., 153, 275, 392, 417, 422, 438, 439  
 Darlington, C. D., 605, 610  
 Darrow, C. W., 182, 509, 513, 514  
 Darrow, D. C., 387, 401, 402, 592  
 Darzent, M., 166  
 Datta, S., 658  
 Dauber, D. V., 302  
 Davenport, H. W., 364, 508  
 Davenport, V. D., 349, 350  
 David, *see also* Fierz-David, H. E.  
 Davidson, C. S., 333, 616  
 Davidson, W. M., 372  
 Davies, P. W., 358, 435  
 Davis, B. D., 350, 631, 632, 639  
 Davis, B. M., 434  
 Davis, E. W., 515, 535  
 Davis, H., 553  
 Davis, L., 548  
 Davidson, C., 181, 548  
 Davson, H., 596  
 Dawes, G. S., 314, 651, 652  
 Dawson, A. B., 58  
 Dawson, G. D., 508, 511, 521  
 Dawson, H., 92  
 Day, F. T., 62  
 Day, H. B., 635  
 Day, R., 258, 259  
 De, B. N., 445  
 De, P., 178, 445  
 Deakins, M., 105  
 De Alba, J., 53  
 De Albuquerque, P. F., 381  
 De Allende, I. L. C., 53  
 Deane, H. W., 20, 60  
 Deanesly, R., 69  
 Deaver, J. M., 336  
 De Baker, J., 272  
 De Balsac, R. H., 311  
 De Bodo, R. C., 386, 388, 397, 399  
 DeBoer, B., 386  
 Debray, C., 192, 208  
 de Castro, F., 469  
 Decherd, G. M., 305  
 Decoulx, P., 318  
 Decourt, J., 654, 655  
 Decourt, Ph., 585  
 De Duve, C., 86  
 De Eandi, F., 58  
 De Espanes, E. M., 305  
 Deglaude, L., 305  
 DeGowin, E. L., 338  
 De Graff, A. C., 310  
 de Gutierrez-Mahoney, D. G., 561, 566  
 Deibert, A. V., 657  
 Deichmann, W. B., 642  
 De Jongh, T. W., 154, 157, 158  
 Dekaneas, D., 315, 372  
 De La Balze, F. S., 74, 84  
 Delachaux, A., 150  
 Delay, J., 311  
 Del Castillo, E. B., 74  
 Delga, J., 586  
 Delgado, E., 431  
 D'Elseaux, F. C., 361  
 Deltour, G. H., 107  
 de Meio, R. H., 642  
 Demerec, M., 611  
 Deming, M., 366, 437  
 Dempsey, E. M., 71, 73  
 Dempsey, E. W., 20, 60, 386  
 De Muro, P., 201  
 Demuth, E. L., 181, 548  
 De Muylder, C., 164, 235, 384  
 Denber, H. C. B., 165  
 Dendale, R., 657  
 Dennis, J., 363  
 Denny-Brown, D., 138  
 DeNogales, C., 74  
 Denolin, H., 310, 315  
 Denslow, J. S., 137, 138  
 Denton, R. L., 350  
 De Ramirez, M. R., 401  
 de Rezende, N., 460  
 Deringer, M. K., 623  
 Derobert, L., 435  
 De Robertis, E., 70, 71, 210  
 Derrien, Y., 587  
 De Santi, E., 239  
 Dessauer, G., 106  
 De Takats, G., 171  
 Detwiler, S. R., 33, 39  
 Deulofeu, V., 305  
 Deutsch, A., 128, 129  
 Deutsch, H. F., 339  
 Devine, J. W., 564, 565  
 DeVita, J., 56  
 Devoir, M., 435  
 DeWar, M., 104  
 Dexter, L., 287, 344  
 Deyrup, I. J., 586  
 Diamond, L. K., 338, 350  
 Diaz, J. T., 368  
 Di Cio, A. V., 356  
 Dick, F. M., 165, 535  
 Dicker, S. E., 226, 240, 394, 395, 397  
 Dickerson, V. C., 246, 589  
 Dickinson, A. M., 442  
 Dickman, G. H., 182  
 diCori, F., 518  
 Dieke, S. H., 666  
 Dierick, J., 192  
 Diethelm, O., 571  
 Di Fiore, M. S. H., 111  
 Dill, D. B., 362, 370, 371, 373, 374  
 Diamond, G., 317  
 Dinets, B. Ya., 583  
 Dittmer, K., 90  
 Dixon, C. F., 88, 213  
 Djabri, A., 111  
 Dobriner, K., 79, 80  
 Dobyns, B. M., 71  
 Dobzhansky, T., 609  
 Dock, W., 159, 245  
 Dodds, G. S., 112  
 Doermann, A. H., 614  
 Dohan, F. C., 89, 244  
 Dole, V. P., 231, 232, 262, 280, 583  
 Dominquez, R., 585  
 Donahue, D. D., 642  
 Donald, W. D., 264  
 Donaldson, E., 79  
 Donaldson, G., 108  
 Donaldson, G. M. M., 624

- Donaldson, W., 235  
 Donelson, E. G., 360  
 Donnel, V., 239  
 Donovan, G. E., 521  
 Dontigny, P., 244  
 Donzelet, E., 311  
 Dorfman, R. I., 61, 79, 80, 240  
 Dornbush, A. C., 614  
 Dornfeld, E. J., 23  
 Dorrell, I., 643  
 Dosne, C., 644  
 Doubilet, H., 211  
 Dougherty, T. F., 83, 633  
 Douglass, P. M., 35  
 Doumer, E., 318  
 Doupe, J., 166, 171, 565  
 Do Valle, J. R., 107  
 Dovey, V. J., 511, 512, 521  
 Dow, P., 255, 256, 308  
 Dow, R. S., 518, 540, 541  
 Downman, C. B. B., 256  
 Doyle, W. L., 666  
 Dozois, T. F., 638  
 Drabkin, D. L., 358, 365, 435  
 Drager, G. A., 175  
 Dragstedt, C. A., 653, 654, 655  
 Dragstedt, L. R., 166, 173, 208  
 Drinker, C. K., 263, 402, 447  
 Dripps, R. D., 366, 437, 442, 447  
 Dripps, R. D., Jr., 358  
 Driver, R. L., 206  
 Drobinseva, A., 200  
 Droese, W., 154  
 Drury, D. R., 230, 242, 432, 444  
 Duane, R. B., 660  
 DuBois, A. M., 39  
 DuBois, K. B., 129  
 DuBois, K. P., 666  
 Dubois, R., 194  
 Dubos, R., 634, 635, 636, 639  
 Dubos, R. J., 284, 350  
 Dubouloz, P., 587  
 Dubuisson, M., 121  
 Duchosal, P., 311  
 Duckworth, J., 110, 111  
 Duff, F. L., 432  
 Duff, G. L., 85  
 Duffy, E., 90  
 Duke, K. L., 59  
 Dumke, P. R., 305, 366, 437  
 Dumont, L., 235  
 Duncan, G. W., 274  
 Dunham, L. J., 199, 219  
 Dunihue, F. W., 235  
 Dunn, A. L., 139, 517  
 Dunn, J. S., 243  
 Dunn, L. C., 607  
 Dunn, T. B., 244  
 Dunning, W. F., 623  
 Dunphy, J. E., 347  
 Duomarco, J., 277  
 Durand, P., 238  
 Durken, B., 3  
 Duspiva, F., 23  
 Dustin, A. P., 13  
 Dutcher, R. A., 110  
 Dutton, D. F., 208  
 Du Vigneaud, V., 7, 8, 90  
 Dworacek, E., 586  
 Dworkin, R. M., 283, 285  
 Dyniewicz, H. A., 217  
 Dzikovskii, V. A., 396
- E**
- Eagle, H., 638, 664  
 Eakin, R. M., 34  
 Earle, D. P., Jr., 226  
 Early, R. L., 661  
 Eastman, N. J., 159  
 Eaton, A. G., 229, 589  
 Eaton, M. D., 661  
 Ebert, R. V., 285, 346  
 Eccles, E. C., 133, 140, 463, 464, 465, 466, 467, 493, 495, 496, 498, 499  
 Echlin, F. A., 517  
 Ecke, R. S., 659  
 Ecker, E. E., 638  
 Eckman, M., 371, 372, 433, 434  
 Eckstein, H. C., 8  
 Eckstein, R. W., 259, 277, 279, 280  
 Ectors, L., 179  
 Edds, M. V., 140  
 Edelen, E. W., 59  
 Edelman, A., 311, 366, 437, 439  
 Edholm, O. G., 169, 258, 259, 275, 286, 431  
 Edsall, J. T., 329, 331, 335  
 Edwards, G. A., 357, 368  
 Edwards, H. T., 362, 369, 373  
 Eggleston, N. M., 80  
 Eggleton, M. G., 239, 394, 396  
 Eggleton, P., 439  
 Ehrich, W. E., 633  
 Eichelberger, L., 284, 401, 592  
 Eichert, H., 314  
 Eichna, L. W., 382, 391, 392, 418, 419  
 Eichorn, K. B., 9  
 Eiler, J. J., 588  
 Eisele, C. W., 401, 592  
 Eisenberg, H., 84, 104  
 Elam, *see also* Troesch-Elam, E.  
 Elbel, E. R., 155, 156, 157  
 Elden, C. A., 54  
 Elftman, H., 33  
 Elias, H., 201, 654  
 Eliot, T. S., 283  
 Elkes, J. J., 217  
 Elkington, J. R., 286, 381, 382, 386, 387, 402, 587  
 Elliott, J., 337  
 Elliott, R. H. E., 374  
 Elliott, R. V., 304, 371, 429  
 Ellis, G. H., 110, 615  
 Ellonen, A., 166  
 Elmadjian, F., 83  
 Elman, R., 210, 350  
 Elsdon, S. R., 193, 263  
 Elson, L. A., 642  
 Elvehjem, C. A., 110  
 Emerson, C. P., Jr., 285  
 Emerson, G. A., 90  
 Emerson, H. S., 32  
 Emerson, K., Jr., 232, 262, 280  
 Emlen, J. T., Jr., 664, 666  
 Emmel, V. M., 244  
 Emmelin, N., 192, 195, 655  
 Emmett, J., 69  
 Ender, C. A., 401  
 Enders, J. F., 340, 341, 342, 630  
 Enders, R. K., 53  
 Endicott, K. M., 9, 315  
 Enelow, A. J., 198, 596  
 Engbaek, L., 136  
 Engel, D., 586  
 Engel, F. L., 592  
 Engel, G. L., 286, 362, 432, 513, 516, 518, 520, 548  
 Engel, L. L., 78  
 Engelfried, J. J., 61  
 Engelhardt, H. T., 392

- Engelhardt, W. A., 127  
 England, A., Jr., 329  
 Engle, E. T., 55  
 Engle, H. M., 516  
 Engström, A., 123  
 Enteman, C., 9  
 Entenman, E., 582  
 Ephrussi, B., 608  
 Epstein, M. A., 370, 321, 439  
 Epstein, S., 653, 655  
 Erickson, L., 152, 313  
 Erlanger, G., 461, 474, 485, 488, 494  
 Ernst, E., 597  
 Erahoff, B. H., 316  
 Eschenbrenner, A. B., 56, 244  
 Essel, 311  
 Essex, H. E., 281, 312, 416, 443, 460  
 Ettore, J., 105  
 Evans, C. L., 316  
 Evans, D. G., 639  
 Evans, E., 168  
 Evans, E. I., 285, 309, 586  
 Evans, F. G., 103  
 Evans, H. M., 55, 58, 75, 77, 78, 89, 107, 108  
 Evans, J. A., 177, 564  
 Evans, J. P., 539  
 Evans, P. L., 60  
 Evans, R. D., 74  
 Evans, W., 313  
 Evans, W. F., 170, 171, 259, 260, 289, 310  
 Everett, G. M., 314, 653  
 Everett, J. W., 53  
 Everett, N. B., 57  
 Eversole, W. J., 644  
 Exton, W. G., 358  
 Eyster, I. A., 136  
 Eyster, J. A. E., 312
- F**
- Faber, M., 245, 246  
 Fabiani, G., 109  
 Fabre, L., 172  
 Fahnestock, M. K., 416  
 Failor, E. A., 57  
 Fairman, D., 525, 526, 527, 534, 541, 545  
 Falconer, M. A., 566  
 Fales, D. E., 33, 301  
 Falkenheim, M., 106  
 Faller, A., 301, 307  
 Fankhauser, G., 39  
 Fankuchen, I., 103, 126
- Farah, A., 317, 318  
 Farber, E. M., 653, 654, 655  
 Farr, L. E., 365  
 Farris, E. J., 182, 235  
 Faulkner, J. M., 366  
 Fauteux, M., 168, 275, 310  
 Fearon, P. J., 590  
 Feder, A., 284  
 Feel, M. L., 240  
 Fegler, J., 439  
 Feigen, G., 285  
 Feil, M. L., 79  
 Feinberg, A. R., 654, 655  
 Feinberg, S. M., 653, 654, 655  
 Feindel, W., 516  
 Feinstein, B., 138  
 Feiring, W., 159  
 Felder, L., 87  
 Feldberg, W., 134, 135, 459, 468, 469, 478, 653  
 Felder, R. E., 533  
 Feldman, R. S., 436  
 Feldmann, H., 256  
 Feitelberg, S., 319  
 Fell, H. B., 107  
 Fels, E., 58  
 Fels, S. S., 204, 206, 393, 641  
 Felsher, Z., 390  
 Felton, L. D., 632  
 Fender, F. A., 430  
 Fenn, W. O., 122, 123, 129, 130, 131, 274, 308, 370, 371, 439, 444, 445, 448, 581, 590, 591  
 Fenning, C., 303, 304  
 Fenning, C. R., 304  
 Fenton, P. F., 216  
 Fergen, A., 192  
 Ferguson, F. P., 229, 313, 589  
 Ferguson, J. H., 336  
 Ferguson, J. K. W., 375  
 Ferin, J., 53  
 Fernald, R. L., 33  
 Ferneau, I. F., 110  
 Fernholz, H., 12  
 Feroldi, J., 174  
 Ferrebee, J. W., 591  
 Ferris, B. G., Jr., 258, 259  
 Ferris, E. B., 362, 513, 520  
 Ferris, E. B., Jr., 274, 432  
 Ferry, J. D., 329  
 Ferry, R. M., 327, 331  
 Fertman, M. H., 302
- Fessard, A., 473, 478, 480  
 Fetcher, E. S., Jr., 388, 595  
 Fick, H., 103  
 Fick, R., 285  
 Field, E. J., 301  
 Field, J. B., 584  
 Fields, H., 62  
 Fierst, C. E., 285  
 Fierz-David, H. E., 655  
 Fiese, M. J., 194  
 Findley, T., 171  
 Fine, J., 216, 247, 248, 270, 278, 280, 282, 285, 287, 309, 346  
 Finerty, J. C., 134, 440, 489  
 Fineainger, J. E., 515, 517, 519, 520  
 Finger, F. W., 569  
 Fink, K., 422  
 Fink, R. D., 175  
 Finkelstein, N., 226  
 Fischberg, M., 39  
 Fischel, E. E., 660  
 Fischer, E., 119, 140, 141  
 Fischer, H., 588  
 Fischer, P., 592  
 Fishbein, J. G., 105  
 Fishberg, E. H., 74  
 Fisher, N. B., 433  
 Fisher, R. A., 619  
 Fisher, R. L., 318  
 Fisher, S., 657  
 Fishler, M. C., 582, 585  
 Fitzgerald, O., 200, 236, 592, 596  
 Fitzgerald, P. A., 170  
 Flanders, S. E., 40  
 Fleckenstein, A., 585  
 Fleisch, A., 443  
 Fleischacker, H. H., 182  
 Fleischmann, W., 109  
 Fleishman, W., 77  
 Fleming, J. J., 197  
 Fletcher, A. G., Jr., 286, 309  
 Flexner, J. B., 38  
 Flexner, L. B., 19, 38, 374, 585, 592  
 Flick, J. B., 590  
 Flink, I. B., 131  
 Flippin, H. F., 641  
 Flock, E. V., 129  
 Flodmark, S., 562  
 Florin, M., 327  
 Florsdorf, E. W., 329  
 Floyd, N. F., 8, 234  
 Flynn, J. E., 309

- Foa, P. P., 164  
 Foglia, V. G., 58, 91  
 Foley, J. O., 164  
 Folk, G. E., 392  
 Folkow, B., 129  
 Follansbee, R., 216, 358, 388  
 Folley, S. J., 62, 74, 81  
 Follis, R. H., Jr., 112  
 Foltz, L., 213  
 Fontaine, R., 166, 174  
 Foote, E. C., 61  
 Foote, C. L., 56  
 Forbes, A. P., 79, 421  
 Forbes, J. C., 73  
 Forbes, W. H., 82, 366, 367, 392, 583  
 Fordham, D., 155  
 Forrai, E., 586  
 Forsham, P. H., 375  
 Forster, E., 174  
 Forster, F. M., 83, 508, 513  
 Forester, R. E., II, 258, 259  
 Forster, H. W., 343  
 Forester, R. P., 226, 227, 231, 235  
 Fosdick, L. S., 105, 195  
 Foster, A. D., 169  
 Foster, R. H. K., 653  
 Fournel, J., 653, 654  
 Fowler, E. F., 171  
 Fowler, E. H., 621  
 Fowler, R. C., 106  
 Fox, C. A., 371, 433  
 Fox, H. M., 621  
 Fraenkel-Conrat, H. L., 635  
 Frame, E. G., 92  
 Francillon, M., 211  
 Franck, C., 215  
 Frank, A. H., 51, 53, 54  
 Frank, D. E., 655  
 Frank, H. A., 247, 248, 270, 278, 280, 282, 285, 287, 309, 346, 586  
 Franke, R. E., 358, 366, 372  
 Franklin, J., 157  
 Franklin, K. J., 277  
 Franks, M., 90  
 Franseen, E. B., 286  
 Frankston, J. E., 230  
 Frant, S., 342  
 Frantz, R. H., 165, 535  
 Fraps, G. S., 615  
 Fraps, R. M., 23, 51, 53, 55  
 Fraser, F. C., 624  
 Frazer, A. C., 217  
 Freedberg, A. S., 309  
 Freedman, H., 564, 565  
 Freeman, A., 164  
 Freeman, G. G., 635  
 Freeman, S., 75, 108, 172, 206, 237, 239, 244, 393, 394  
 Freeman, W., 531  
 Freiesleben, E., 72  
 Freud, S., 570  
 Freund, J., 634  
 Freundlich, J., 317  
 Fried, J. A., 109  
 Friedberg, L., 283  
 Friedemann, U., 589  
 Friedewald, W. F., 640  
 Friedgood, C. E., 61, 88, 90, 583  
 Friedheim, E. A. H., 657  
 Friedlaender, S., 654, 655  
 Friedland, C. K., 308, 445  
 Friedman, H., 446, 447  
 Friedman, L., 422  
 Friedman, M., 318  
 Friedman, M. H., 51  
 Friedman, M. H. F., 202, 203, 206, 209, 219  
 Friedman, N. B., 416  
 Friedman, T. E., 154  
 Friesen, S., 174, 209  
 Froehlich, F., 173, 174  
 Frolov, U. P., 446  
 Froment, R., 304  
 Fry, F. E. J., 375  
 Fugitt, C. H., 434  
 Fugo, N. W., 399  
 Fulton, G. P., 432, 438  
 Fulton, J., 134  
 Fulton, J. F., 52, 368, 478, 534, 540, 548  
 Furchgott, R. F., 87, 214, 233, 287  
 Furth, J., 1, 635  
 Futch, P. H., 382
- G**
- Gabriel, M. L., 36  
 Gabrilove, J. L., 89, 237  
 Gaddum, J. H., 134  
 Gaehlinger, H., 173  
 Gaetgens, G., 583  
 Gage, R. P., 257  
 Gagne, A. P., 371, 439, 443  
 Gaillard, P. J., 110  
 Galandey, V. F., 61  
 Galbraith, H., 75  
 Gallagher, T. F., 78  
 Gallavardin, L., 304  
 Galmiche, P., 581, 586  
 Galvao, P. E., 425  
 Galvin, T., 207  
 Gamble, J. L., 382, 387, 395  
 Gantt, W. H., 570, 577  
 Garasenko, V. M., 439  
 Garb, S., 264  
 Garber, E., 207  
 Garcia Ramos, J., 91, 547  
 Gardner, E., 260  
 Gardner, W. U., 108  
 Gargill, S. L., 22, 54, 57  
 Garol, H. W., 534, 535  
 Garvin, R. O., 194  
 Gasser, H. S., 472, 488, 557, 559, 565  
 Gassner, F. X., 76  
 Gauhe, A., 27  
 Gaunt, R., 384, 385, 388, 396, 644  
 Gauss, H., 218, 381  
 Gavette, E., 106  
 Gavrilov, R. I., 216  
 Gay, F. P., 633  
 Gay, O., 58  
 Gayet-Hallion, T., 314  
 Gear, H. S., 382  
 Geer, H. A., 660  
 Geets, W., 462  
 Geiger, W. B., 661  
 Geigy, R., 37  
 Geiling, E. M. K., 305, 318, 643, 657  
 Geisendorff, W., 61  
 Geist, G. R., 207  
 Gelfan, S., 474  
 Gelin, G., 238  
 Gellhorn, A., 585, 592, 658, 659  
 Gellhorn, E., 165, 178, 180, 182, 183, 385, 510, 511, 516, 536, 537, 538, 547  
 Gellis, S. S., 342, 343, 632  
 Gemmill, C. L., 369, 372  
 Genauer, M., 424  
 Gemmill, W. F., 5  
 Genuit, H., 587  
 Gerard, R. W., 478, 479, 493, 498  
 Gerebtzoff, M. A., 470, 531  
 Geréndas, M., 121  
 Gerguson, J. H., 337

- Gerity, M. K., 591  
 Gerjuoy, J. R., 260  
 Gerkins, S. D., 153, 392,  
 418, 421, 422  
 Gerl, A. J., 74  
 Gerlis, L. M., 311  
 Germain, P., 152  
 Germain, J., 215  
 Gernandt, B., 166, 167,  
 177, 272, 440, 442  
 Gernandt, B., 166, 272,  
 440, 442  
 Gersch, E. S., 608  
 Gersch, I., 290, 436, 437,  
 515, 659  
 Gertler, M. M., 307, 311  
 Gesell, R., 134, 195, 440,  
 489  
 Ghormley, R. K., 159  
 Ghosh, J. K., 641  
 Ghosh, S. M., 586  
 Ghosh, T. N., 658  
 Giacomino, N. J., 74  
 Giard, P., 231  
 Gibbs, E. L., 261, 361,  
 362, 440, 508, 513, 518,  
 520  
 Gibbs, E. W., 566  
 Gibbs, F. A., 261, 361,  
 362, 440, 508, 517, 518,  
 519, 520  
 Gibbs, O. S., 397  
 Gibson, J. G., 347  
 Gibson, Q. H., 358, 365  
 Gibson, S. T., 346, 348  
 Giddings, G., 205  
 Gilbert, C. S., 52  
 Gilbert, N. C., 196, 317,  
 443  
 Gillespie, W. H., 275  
 Gillick, F. G., 319  
 Gilligan, D. R., 641  
 Gillman, J., 52, 60  
 Gillot, F., 657  
 Gilman, A., 178, 227, 305,  
 458, 468, 490, 651, 661,  
 662, 663  
 Gilmore, H. R., 343  
 Gilson, A. S., 121, 124,  
 168, 314, 443  
 Gilson, W. E., 312  
 Ginn, J. T., 106  
 Ginsberg, H., 317  
 Ginsburg, E., 372, 434  
 Girard, M., 205  
 Gisler, L. E., 155  
 Glaser, M. A., 514  
 Glassco, E. M., 652, 654  
 Glenn, P. M., 206, 318  
 Glickman, N., 416  
 Glock, G. E., 71, 74  
 Glomset, D. J., 167  
 Glückauf, E., 588  
 Glucksohn-Schonheimer,  
 S., 40, 41  
 Gobbel, W. G., Jr., 529  
 Goddard, D. R., 581, 590  
 Godden, W., 110  
 Goebel, W. F., 639, 640  
 Goetsch, M., 244  
 Goetz, R. H., 258  
 Goevaerts, J., 582  
 Goggio, A. F., 433  
 Gold, H., 237  
 Goldberg, H., 136  
 Goldberg, M., 216  
 Goldblatt, H., 8, 10, 63,  
 74, 287, 288  
 Goldfinger, D., 316  
 Goldin, A., 38  
 Goldman, H. M., 1, 2  
 Goldman, D. C., 436  
 Goldner, M. G., 85, 90, 91  
 Goldring, W., 226, 287,  
 288, 289, 309  
 Goldschmidt, R., 609  
 Goldsmith, E. D., 35, 61,  
 74, 434  
 Golla, Y. M. L., 60, 77, 78  
 Gomez, D. M., 271  
 Gomori, G., 85, 90, 91,  
 106  
 Goncalves, J. M., 70, 71  
 Gonnard, P., 234  
 Gonzalez, *see also* Oliver-  
 Gonzalez, J.  
 Gonzon, B., 403  
 Gonzy, P., 175  
 Good, M. G., 23  
 Good, R. A., 661  
 Goodall, A. L., 360  
 Goodell, H., 557, 558,  
 561, 563  
 Goodman, J., 79  
 Goodman, J. I., 172, 194  
 Goodman, L. S., 517, 520,  
 651  
 Goodman, S., 207  
 Goodpastor, W. E., 393  
 Goodwin, C. W., 358, 436  
 Goodwin, J. E., 520  
 Goodwin, L. G., 640, 658  
 Goormaghtigh, N., 235  
 Gorbman, A., 58  
 Gordon, A. S., 35, 61,  
 74, 434  
 Gordon, G., 557, 558,  
 564  
 Gordon, G. S., 78  
 Gordon, H., 589  
 Gorev, N. N., 171  
 Gostin, L. J., 339  
 Gottlieb, B., 103  
 Gottlieb, J. S., 519  
 Gottschalk, L. A., 177  
 Gould, B. S., 107  
 Gouze, M., 108  
 Govaerts, J., 400  
 Govons, S. R., 286  
 Gowen, J. W., 617, 622  
 Graaf, A. M., 60  
 Graaf, S., 60  
 Graber, M., 226  
 Graef, I., 82  
 Graf, C., 500, 540  
 Graff, S., 33  
 Graham, A. W., 257  
 Graham, G. K., 277, 279  
 Graham, H. T., 472  
 Graham, J., 479  
 Graham-Bryce, I., 82  
 Grandjean, E., 443  
 Grandpierre, R., 177, 179  
 Grandgaud, R., 105, 108,  
 109  
 Granit, R., 166, 466, 474,  
 494, 566  
 Grant, C. W., 659  
 Grant, R., 2  
 Grant, R. S., 137  
 Grasso, R., 71  
 Grasso-Cannizzo, E., 584  
 Gravelle, L. J., 171  
 Graves, A. P., 53, 54  
 Gray, C. H., 89  
 Gray, J. S., 150, 439, 441,  
 444  
 Gray, W., 318  
 Graybiel, A., 155, 157,  
 310, 369  
 Greaves, R. J. N., 329  
 Greeley, P. O., 230, 432,  
 444  
 Green, A. A., 327, 328,  
 344  
 Green, D. M., 371, 433  
 Green, E. L., 155, 444  
 Green, H. D., 265, 266,  
 268, 269, 271, 280, 283,  
 285, 286  
 Green, H. N., 129, 231,  
 396  
 Green, M. M., 609  
 Greenbaum, A. L., 81  
 Greenbaum, S. S., 657  
 Greenberg, B. E., 22, 54

Greenberg, D. M., 104, 111, 112  
 Greenberg, M., 342  
 Greenblatt, I. J., 207  
 Greenblatt, M., 516, 517, 518  
 Greenblatt, R. B., 61, 657  
 Greene, H. D., 237  
 Greene, H. J., 583  
 Greene, H. S. N., 3, 4  
 Greenstein, J. P., 11, 329, 605  
 Greenstein, L., 518  
 Gregersen, M. I., 278, 280, 284, 347, 366, 435  
 Gregg, D. E., 317  
 Gregor, H. P., 388, 594, 595  
 Gregory, J. E., 113  
 Greisbach, W. E., 666  
 Greisheimer, E. M., 215  
 Greisen, J. C., 169, 273  
 Gremillion, A. I., 313  
 Greulich, W. W., 51  
 Grief, D., 659  
 Grier, R. C., Jr., 264  
 Griffie, R. A., 195  
 Griffin, D. R., 438, 439  
 Griffin, G. E., 401  
 Griffith, L., 401  
 Griffith, W. H., 8  
 Grimson, K. S., 171, 173, 177, 272, 290  
 Grinker, R., 156  
 Grinker, R. R., 572, 574  
 Grinstein, A. M., 564, 565  
 Grixoni, I., 584  
 Groat, R. A., 461, 548  
 Grodins, F. S., 371  
 Grodins, F. S., 140, 446  
 Groedel, F. M., 274, 304, 311, 313  
 Grognot, P., 179  
 Grollman, A., 235, 236, 287, 288  
 Gross, E. G., 171, 172  
 Gross, I. H., 182  
 Gross, L., 623  
 Gross, P. M., Jr., 334, 335, 336, 339, 340  
 Gross, R. E., 303  
 Grossberg, D. B., 635  
 Grossman, M. I., 200, 201, 206, 207, 208, 654  
 Grossman, N., 319  
 Gruber, C. M., 304, 307  
 Gruenstein, M., 204, 206  
 Gruhzt, O. M., 655

Grundfest, H., 114, 319, 458, 486, 487, 488, 490, 491, 492, 493, 498, 500, 545  
 Gruning, W., 121  
 Grut, A., 358  
 Gualtierotti, T., 137  
 Gubner, R., 289  
 Guerrant, N. B., 110  
 Guerrier, Y., 172  
 Guest, M. M., 438  
 Guetzkow, H., 157  
 Guggenheim, K., 393, 422  
 Guibert, H. L., 172  
 Guidjian, E. S., 439  
 Guild, R., 71, 91, 283, 284  
 Guillet, R., 172  
 Gukelberger, M., 394, 395  
 Gulland, J. M., 662  
 Gunther, L., 142, 279, 283  
 Gurdjian, E. S., 515  
 Gurevich, E., 168, 306, 314  
 Gurvich, N. L., 306  
 Gustavson, R. G., 76  
 Guterman, H. S., 61, 520  
 Guthrie, J. E., 584  
 Gutmann, E., 141, 556  
 Guttman, R., 138  
 Guttman, S. A., 518  
 Guttman, L., 556  
 György, P., 8, 9, 10, 63, 74  
 Györgyi, *see also* Szent-Györgyi, A.

## H

Haag, H. B., 155  
 Haddow, A., 13, 14, 661  
 Hadley, M., 55  
 Hadorn, E., 34, 605  
 Haegge, L. F., 130, 131, 590, 591  
 Häggqvist, G., 127, 137, 138  
 Hagstrom, B., 25  
 Hahn, G. A., 651  
 Hahn, H., 582  
 Hahn, L., 130, 585  
 Hahn, P. F., 264, 595  
 Haist, R. E., 88, 283, 284  
 Hajdu, I., 154  
 Haldi, J., 154, 205, 401  
 Hall, C. E., 20, 83, 113, 126, 127  
 Hall, F. G., 358, 370, 444, 446  
 Hall, G. E., 244  
 Hall, M. G., 374  
 Hall, W. M., 343  
 Hallenbeck, G. A., 653, 654  
 Halminen, E., 304  
 Halperin, M. H., 87, 366, 372, 433  
 Halpern, B. N., 653, 655  
 Halpern, R. M., 302  
 Halpert, B., 73  
 Halstead, W. C., 433  
 Halverstadt, I. F., 72  
 Ham, G. C., 239, 240  
 Hamar, N., 151  
 Hambley, W. D., 156  
 Hamburger, V., 19  
 Hamil, B. N., 62  
 Hamilton, B., 104  
 Hamilton, C. E., 52  
 Hamilton, H. L., 660  
 Hamilton, J. D., 9  
 Hamilton, J. G. M., 257  
 Hamilton, J. I., 283, 284  
 Hamilton, J. W., 556  
 Hamilton, P. B., 231, 232, 262, 280  
 Hamilton, T. S., 420, 421, 422  
 Hamilton, W. F., 255, 256, 307, 308  
 Hammarskjöld, S. O., 134  
 Hammett, F. S., 1  
 Hammond, J., Jr., 54, 62  
 Hammond, W. S., 166  
 Hamolsky, M., 62  
 Hampil, B., 640  
 Hampson, J. L., 541, 545  
 Haney, H. F., 168, 178, 196, 314  
 Handford, S. W., 34  
 Hansen, E. T., 195, 440, 489  
 Hanson, J. F., 310  
 Hantman, S., 310  
 Hard, W. L., 60, 88, 459, 539  
 Hardy, J. D., 286, 309, 563  
 Hardy, W. B., 328  
 Hare, K., 261, 272, 381, 398, 399  
 Hare, R. S., 398  
 Harington, C. R., 69, 70  
 Harkins, H. N., 287  
 Harmon, P. M., 374  
 Harper, A. A., 174, 211  
 Harper, W. F., 302  
 Harpman, J. A., 554, 555, 556, 557  
 Harrer, C. J., 371  
 Harris, A., 631, 632, 639



- Harris, A. S., 305, 431  
 Harris, D. L., 23  
 Harris, H. A., 110  
 Harris, L. C., 315  
 Harris, M., 34, 290  
 Harris, P. N., 91  
 Harris, S. C., 197  
 Harris, T. N., 633  
 Harris, W. H., Jr., 5  
 Harrison, C. R., 541, 545  
 Harrison, D. C., 365  
 Harrison, F., 179  
 Harrison, I., 557, 558  
 Harrison, J. A., 621  
 Harrison, R. G., 30, 83  
 Harrison, T. R., 159, 235, 236  
 Hart, E. B., 110  
 Hartiala, K., 431  
 Hartiata, F., 202  
 Hartline, H. K., 432  
 Hartman, C. G., 51, 53, 57  
 Hartman, F. A., 79  
 Hartman, F. W., 205, 285  
 Hartmann, M., 25  
 Hartung, E. J., 594  
 Hartwell, J. L., 12, 661  
 Harvey, A. M., 133  
 Harvey, C., 55  
 Harvey, E. B., 20, 25, 32  
 Harvey, E. N., 21, 123, 290, 437  
 Haskell, H. S., 170, 171, 259, 260, 289  
 Hasset, C. C., 137, 138  
 Hass, G. M., 113  
 Hastings, A. B., 590  
 Hastings, E., 586  
 Hatch, M. D., 210  
 Haugaard, N., 364, 366, 436  
 Haurwitz, F., 631, 632, 633, 639  
 Hauschka, T., 11  
 Havens, W. P., Jr., 343  
 Hawkins, J. C., Jr., 237  
 Hawkins, W. B., 85  
 Hawkinson, G. E., 61, 290, 437  
 Hawn, C. v. Z., 336  
 Hay, H., 349  
 Hay, J. J., 319  
 Hayashi, T., 21  
 Hayes, F. R., 30  
 Haynes, B. W., 309  
 Haynes, F. W., 297, 344  
 Hays, H. W., 57, 142, 279, 385, 654, 655  
 Hayward, G. W., 311  
 Haywood, Ch., 589  
 Hazim, A., 305  
 Head, H., 557, 563  
 Heath, C. W., 155  
 Hebb, C. O., 263, 439  
 Hebb, D. O., 548, 570, 571, 574  
 Hebbel, E. H., 72  
 Hechter, O., 285  
 Heck, F. J., 209  
 Hegnauer, A. H., 129  
 Hegsted, D. M., 91, 349  
 Heidelberg, M., 634, 637, 638, 639  
 Heidenthal, G., 608  
 Heilbrunn, L. V., 422  
 Heilman, D. H., 583  
 Heilman, F. R., 583  
 Heim, L. M., 55  
 Heimbecker, P., 240  
 Helander, E. V., 204  
 Hellauer, H., 134  
 Hellebrandt, F. A., 286  
 Heller, A. L., 265, 266, 268, 269, 271, 280  
 Heller, C. G., 644  
 Heller, E. J., 644  
 Heller, H., 226, 240, 381, 395, 397  
 Hellman, L. M., 592  
 Helm, J. D., 582  
 Helmholtz, H. F., 370, 422, 438, 444  
 Helvesy, G., 585  
 Hemingway, A., 304, 358  
 Hemmeler, G., 208  
 Henderson, C. R., 155, 313  
 Henderson, J. L., 624  
 Henle, G., 640  
 Henle, W., 632, 636, 640  
 Henley, C., 35  
 Henny, G. C., 126, 261, 319  
 Henrique, F. C., Jr., 422  
 Henriksen, S. D., 634  
 Henry, C. E., 519  
 Henry, F. M., 158, 438, 439  
 Henry, J. P., 230, 402, 431, 432, 444  
 Henry, M. D., 28  
 Henry, R. J., 28  
 Henschel, A., 154, 198, 313  
 Henshaw, P. S., 661  
 Henstell, H. H., 142, 279, 283  
 Hepler, O. E., 243  
 Heppenstall, M. E., 515, 519  
 Herbut, P. A., 83, 243  
 Herkel, W., 374  
 Hermann, H., 211  
 Hernandez-Morales, F., 657  
 Herrell, W. E., 583  
 Herrick, E. H., 77  
 Herrin, R. C., 191, 401  
 Herring, V. V., 77  
 Herrman, L. G., 566  
 Herrmann, G. R., 310  
 Herrmann, J. B., 62  
 Hershberg, D., 316  
 Hershey, A. D., 638  
 Hershey, S. G., 285  
 Hertz, H., 462  
 Hertz, R., 57  
 Hertz, S., 74  
 Hertzman, A. B., 259  
 Hervey, G. R., 237, 395  
 Herz, E., 548  
 Herzog, E., 313  
 Hess, W. R., 179, 180, 182  
 Heston, W. E., 623  
 Hetherington, A. W., 437  
 Heuser, G. F., 110  
 Hevesy, G., 130, 593  
 Hewitt, L. F., 327  
 Heyl, J. T., 346, 347, 348  
 Heymann, W., 247  
 Heymans, C., 272, 440, 441, 442, 468  
 Hiatt, E. P., 230, 314  
 Hickey, R. C., 399  
 Hickman, K. C. D., 335  
 Hicks, A. M., 310  
 Hicks, E. M., Jr., 78  
 Hidy, H. P., 90  
 Hiestand, W. A., 87, 178, 371, 434  
 Higgins, G. M., 72, 73  
 Hilber, H., 33  
 Hilden, T., 228  
 Hill, A. V., 122, 123, 131, 457, 465  
 Hill, C. H., 658  
 Hill, D., 519  
 Hill, D. L., 30  
 Hill, H. C., 173, 290  
 Hill, J. M., 329  
 Hill, R. T., 56  
 Hillemand, P., 197  
 Hiller, A., 365  
 Hillman, C. C., 257, 289  
 Himwich, W. A., 360  
 Himsforth, H. P., 74, 86  
 Hines, H. M., 140, 141

- Hines, H. J. G., 423  
 Hines, M., 532, 537, 539  
 Hinglais, H., 384, 400  
 Hinnes, E. A., Jr., 257  
 Hinshaw, H. C., 370, 583  
 Hinton, J. W., 170, 171  
 Hinton, T., 609  
 Hirsch, E. O., 588  
 Hirschfeld, J. W., 630, 401  
 Hirschfeld, W., 230  
 Hirschmann, J., 564, 565  
 Hirst, G. K., 640  
 Hisaw, F. L., 52  
 Hitchcock, D. I., 581, 590  
 Hitchcock, F. A., 311, 366, 437, 439  
 Hitchcock, M. W. S., 193, 588  
 Hoadley, L., 19  
 Hoagland, C. L., 141  
 Hoagland, C. S., 240  
 Hoagland, D. R., 581  
 Hoagland, H., 82, 83, 520  
 Hobby, G. L., 583  
 Höber, R., 129, 460, 478, 480, 482, 483, 581, 590  
 Hoblin, R. O., Jr., 70  
 Hodge, C. C., 6  
 Hodge, H. C., 106  
 Hodge, M., 370, 439  
 Hodge, R. S., 519  
 Hodgkin, A. L., 460, 478, 479, 487, 494, 594  
 Hoefer, P. F. A., 518  
 Hoeflich, E. A., 168  
 Hoekstra, J., 218, 654, 655  
 Hoerr, N. L., 265  
 Hoff, E. C., 368  
 Hoff, H. E., 137, 307, 311, 312  
 Hoff, P. M., 368  
 Hoffman, C. E., 371, 432, 439  
 Hoffman, M. M., 79  
 Hoffman, W. S., 217  
 Hoffmann, E. J., 314  
 Hoffmann, F., 314  
 Hogben, L., 391, 624  
 Holden, H. F., 358  
 Holden, R. F., Jr., 226, 395  
 Hollander, F., 204  
 Hollander, W. F., 74  
 Hollander, V. P., 78  
 Hollinshead, W. H., 58, 177, 181, 430  
 Holm, L. W., 666  
 Holmes, G., 532  
 Holm-Jensen, I. B., 593  
 Holt, J. P., 169, 273, 274, 277, 443  
 Holter, H., 19, 28, 30  
 Holtfrete, J., 1, 25, 32, 36, 37  
 Holtman, D. F., 424, 661  
 Holyoke, J. B., 302  
 Holz, A. M., 53  
 Holzlohner, E., 274  
 Homburger, E., 585, 586  
 Homer, G. F., 285  
 Honcke, P., 139, 153  
 Hooker, C. W., 56, 60  
 Hooker, S. B., 631, 637  
 Hooper, K., 651, 652  
 Hoover, M. J., 586  
 Horvath, S. M., 75, 313, 371, 375, 392, 418, 419, 420  
 Horclois, R., 653, 654  
 Horeau, A., 71  
 Horowitz, N. H., 614  
 Horsfall, J. G., 656  
 Horstadius, S., 33, 39  
 Horton, B. T., 201, 205, 653, 654, 655  
 Horwitt, B. N., 80  
 Hoskins, R. G., 573  
 Hott, R. B., 246  
 Houck, C. R., 393  
 Houk, C. L., 611  
 Houlahan, M. B., 614  
 Houssay, A. B., 91  
 Houssay, B. A., 59, 61, 62, 85, 91, 92  
 Houston, C. S., 370, 445  
 Howard, E., 25, 57  
 Howard, F. H., 311, 319  
 Howard, J. E., 84  
 Howard, J. G., 104  
 Howard, P. J., 317  
 Howard, R. C., 306  
 Howe, C. D., 432  
 Howe, P. E., 327  
 Howell, K. M., 302, 633  
 Howell, W. H., 333  
 Howell, W. L., 310  
 Howland, J. W., 346  
 Hoyrup, M., 327  
 Hubbard, R. S., 583  
 Huber, W., 28  
 Huddleston, O. L., 140  
 Hudson, L., 77  
 Hudson, M. F., 386, 392  
 Hueper, W. C., 288, 586  
 Huf, E., 256  
 Huff, C. G., 622  
 Huffman, W. T., 156  
 Huggett, A. St. G., 59  
 Huggins, C., 103, 401  
 Hughes, A. M., 72  
 Hughes, E. H., 61  
 Hughes, J., 472  
 Hughes, J. S., 62  
 Hughes, W. L., Jr., 329, 343, 344, 345, 349, 632, 640  
 Hughes-Schrader, S. J., 20  
 Hugon de Scoeux, F., 616  
 Hull, J. B., 41  
 Hultzman, E. K., 517  
 Humm, D. G., 307, 311  
 Humphrey, R. R., 39  
 Hundley, J. M., 316  
 Hunt, T. E., 60  
 Hunter, A., 310  
 Hunter, F. R., 582  
 Hunter, M. W., 108  
 Hunter, S. W., 370, 439  
 Hunter, W. S., 318  
 Hursh, J. B., 510  
 Hurst, H., 587  
 Hurst, J. G., 623  
 Hurtado, A., 369, 431  
 Hürthle, K., 255  
 Hurwitz, D., 61  
 Hurwitz, R. E., 440  
 Huseby, R. A., 623  
 Huston, J. W., 439  
 Hutchinson, J. C. D., 424  
 Hutchinson, M. D., 337  
 Hutner, S. H., 662  
 Hutt, F. B., 621  
 Hutter, A. M., 583  
 Huttet, G., 211  
 Hutton-Rudolph, M., 488  
 Hutterer, C. P., 654  
 Huxley, A. F., 460, 478, 479  
 Hsin, H. Y., 214  
 Hsu, F. H., 214  
 Hsu, F. Y., 215  
 Hyde, J. E., 135  
 Hyman, C., 81, 282, 584  
 Hyman, I., 557

## I

- Iama, A. M., 205  
 Ichniowski, C. T., 586  
 Ikawa, M., 634, 637, 638  
 Ikeda, C., 634, 637, 638  
 Ing, H. R., 314, 651, 652  
 Ingalls, E. N., 365  
 Ingalls, T. H., 108  
 Ingelfinger, F. J., 264  
 Ingersoll, E. H., 181, 218

Ingle, D. J., 78, 81, 84, 86, 89  
 Ingold, C. T., 613  
 Ingraham, F. D., 331, 332, 333  
 Ingraham, R. C., 279, 285  
 Ingram, W. R., 181  
 Iob, V., 285, 384, 387  
 Irby, V., 230  
 Irving, J. T., 110, 112  
 Irving, L., 374, 375  
 Irwin, M. R., 620  
 Isberg, E. M., 168, 170  
 Israel, A. H., 256  
 Israel, E., 257  
 Israel, R., 305  
 Ivanov, I. I., 51  
 Ivy, A. C., 140, 141, 154, 173, 197, 200, 201, 202, 206, 207, 208, 237, 239, 393, 394, 446, 447, 651, 654  
 Ivy, J. H., 219  
 Izquieta, J. M., *see also* Manrique Izquieta, J.  
 Izuma, S., 583

## J

Jaap, R. G., 57  
 Jackson, B., 386  
 Jacob, N. T., 133  
 Jacob, I., 136  
 Jacobi, M., 285, 446  
 Jacobs, M. H., 582  
 Jacobson, D., 192  
 Jacobson, L., 597  
 Jacobson, S. D., 401  
 Jacquot, R., 394  
 Jacquot-Armand, Y., 394  
 Jadassohn, W., 655  
 Jaeger, L., 29  
 Jaffe, R. H., 633  
 Jakus, M. A., 20, 113, 126, 127  
 James, C. C., 439  
 James, D. F., 540  
 James, G. W., 586  
 Jameson, E., 327  
 Janaki Ammal, E. E., 605  
 Janes, R. G., 92  
 Janeselli, L., 35  
 Janeway, C. A., 341, 342, 346, 347, 348, 350, 630, 632, 640  
 Jansen, J., 543  
 Jasper, H., 511, 557  
 Jasper, H. H., 494

Jauregg, *see also* Wanger-Jauregg, T.  
 Jayle, M. F., 61  
 Jeanjean, R., 174  
 Jeans, P. C., 154  
 Jeener, R., 24  
 Jeffers, W. A., 275  
 Jelineck, V. C., 641  
 Jenkins, H. D., 140  
 Jenney, E. H., 437  
 Jenney, E. W., 290  
 Jennings, C. G., 341  
 Jennings, J. E., 285, 446  
 Jensen, A. V., 369, 430  
 Jensen, I. B., *see also* Holm-Jensen, I. B.  
 Jensen, K. A., 72  
 Jent, M., 460  
 Jerchel, D., 11  
 Jochim, K. E., 255, 259, 319  
 Joel, C. A., 55  
 Joffe, H. H., 310  
 Johansson, D. R., 70  
 Johansson, E. G., 106  
 John, E., 142  
 John, H. M., 134, 478, 489  
 Johnson, A. E., 372, 434, 439  
 Johnson, B. C., 420, 421, 422  
 Johnson, F. H., 633  
 Johnson, F. R., 140  
 Johnson, H. C., 517  
 Johnson, J. R., 260, 264, 267, 276, 280, 282  
 Johnson, L. E., 617  
 Johnson, M. S., 666  
 Johnson, P. L., 106  
 Johnson, R. E., 373, 383, 386, 421  
 Johnson, T., 613  
 Johnston, B. J., 80  
 Johnston, C. H. P., 278  
 Johnston, F. D., 283, 386  
 Johnston, M., 421  
 Johnston, M. W., 239, 392  
 Joiner, R. R., 656  
 Jokl, E., 154, 157, 158  
 Jolie, F., 71  
 Jones, C. M., 173, 209, 558  
 Jones, C. W., 540  
 Jones, D., 661  
 Jones, D. F., 617  
 Jones, E., 194, 595  
 Jones, F. W., 59  
 Jones, G. M., 400

Jones, H. A., 622  
 Jones, L., 181, 218  
 Jones, *see also* Seegar Jones, C. E.  
 Jonxis, J. H. P., 358  
 Jordan, I. R., 132  
 Jordan, J. R., 591  
 Jordan, P., 171  
 Jorgensen, H., 432  
 Jorpes, E., 199  
 Joseph, G. H., 80, 584  
 Joseph, N. R., 585  
 Joseph, S., 388, 396  
 Josephson, B., 227, 228, 229  
 Jost, A., 583  
 Jourdan, F., 304, 393  
 Juba, A., 532  
 Judas, O., 61  
 Juhn, M., 616  
 Jukes, T. H., 614  
 Jund, L., 6  
 Junet, R., 653  
 Jung, F. T., 155, 313  
 Jungeblut, C. W., 633  
 Junker, A., 587  
 Junkersdorf, P., 8  
 Junnila, B. O., 205  
 Justin-Besancon, L., 192  
 Juui, A., 137  
 Juurup, A., 155

## K

Kabat, E. A., 633, 634, 635, 636, 639  
 Kabat, H., 540  
 Kadish, M. A., 629  
 Kahler, H., 12  
 Kahlson, C. S., 655  
 Kahlson, G., 128, 129, 139  
 Kaiser, E., 121, 122, 123, 125  
 Kaiser, M. E., 652, 653, 654, 655  
 Kalckar, H. M., 128, 129  
 Kalder, N. B., 384, 387  
 Kalk, H., 434  
 Kalman, C., 78  
 Kalmbach, E. R., 664  
 Kalmus, H., 617  
 Kamm, O., 235  
 Kane, L. W., 630  
 Kanof, A., 656  
 Kaplan, I. I., 662  
 Kaplan, N. O., 90  
 Karczmar, A. G., 38  
 Karel, L., 446, 641  
 Kark, R., 333

- Karman, S., 358  
 Karpovich, P. V., 152,  
 155, 156, 157, 159, 436,  
 439, 446  
 Karrer, P., 90  
 Karsner, H. T., 5  
 Karvonen, M., 202, 431  
 Kass, E. H., 90, 92  
 Kassell, B., 349  
 Katz, B., 463, 464, 465,  
 467, 486, 487, 494, 500  
 Katz, J., 518  
 Katz, L. N., 177, 273, 283,  
 302, 309, 310, 317, 319  
 Katzenstein, R., 285  
 Katzin, L. I., 286, 422  
 Kaucher, M., 75  
 Kaufman, C., 520  
 Kaufman, I. C., 135  
 Kaufman, S. A., 55  
 Kaulbersz, J., 203  
 Kaunitz, J., 437  
 Kavat, E. A., 631, 632  
 Kawata, N., 595  
 Kay, G. A., 587  
 Kay, H. D., 62  
 Kaylor, C. T., 302  
 Kazmin, V. E., 80  
 Keele, C. A., 231, 232, 262  
 Keen, J. A., 103, 301  
 Keerbergen, G. van., 396  
 Keeton, R. W., 416  
 Keith, N. M., 310  
 Keitt, G. W., 615  
 Kekwick, R. A., 633  
 Kelabuchov, N. I., 443  
 Kellaway, P. E., 72  
 Keller, A. D., 178, 181,  
 474  
 Keller, W. F., 63  
 Kelly, A. H., 182, 546  
 Kellogg, K. E., 593  
 Kelsey, F. D., 92  
 Keltz, B. F., 73  
 Kelvington, T. B., 60  
 Kemp, F. H., 110  
 Kemp, N. E., 32  
 Kempner, W., 235  
 Kendall, E., Jr., 231  
 Kendall, E. C., 78  
 Kendall, F. E., 90, 245,  
 350, 637, 638  
 Kendrick, D. B., Jr., 348  
 Kennard, M. A., 52, 518,  
 534, 535, 539, 548  
 Kennedy, J. A., 375  
 Kennedy, T. H., 666  
 Kenney, E. L., 656  
 Kenney, F. R., 74  
 Kenney, R. A., 230, 396  
 Kent, G. C., Jr., 53  
 Kepler, E. J., 79, 385  
 Kernodle, C. E., Jr., 290  
 Kerr, W. J., 259  
 Kety, S. S., 261, 284, 287,  
 309, 371, 440, 448  
 Keuter, K. E., 653  
 Keys, A., 152, 313, 362  
 Keyser, G. M., 304, 307  
 Kibler, H. H., 436  
 Kidera, G. J., 370, 440  
 Kiefer, E. D., 213  
 Kikuth, W., 659  
 Killian, J. A., 197  
 Killingsworth, W. P., 348  
 Kilvington, T. B., 398  
 Kimbro, R., 159  
 King, B. G., 433  
 King, C. G., 371  
 King, H., 660  
 King, R. E., 139  
 Kingsley, H. D., 346  
 Kirby, W. M. M., 630  
 Kirk, R. L., 391  
 Kirsch, R. E., 432  
 Kirschbaum, A., 91  
 Kisch, B., 311  
 Kizelis, R. W., 156  
 Kjerulf-Jensen, K., 72,  
 587  
 Klain, I., 402, 431, 444  
 Klainer, M. J., 310  
 Kleczkowski, A., 631  
 Kleiber, M., 422  
 Klein, B., 87, 285, 446  
 Klein, I., 230  
 Kleinberg, W., 142, 279  
 Kleiner, J. S., 200  
 Kleinzeller, A., 127  
 Kleitman, N., 424  
 Klendshoj, N. C., 630, 636  
 Klieneberger-Nobel, E.,  
 610  
 Kligler, I. J., 393, 422  
 Kline, O. L., 422  
 Kline, R. F., 84, 372, 429  
 Klingensmith, C. W., 665  
 Klinke, J., 6  
 Klomp, H., 25  
 Kloos, J., 33  
 Klosk, E., 306  
 Knappeis, G. G., 121, 123,  
 124, 127, 128, 129  
 Knisely, M. H., 283  
 Knoefel, P. K., 443, 651,  
 652, 653  
 Knott, J. R., 519  
 Knowlton, A. I., 83, 236,  
 245  
 Knowlton, M., 108  
 Knudsen, E. O., 151, 152,  
 366, 384, 395, 396  
 Knudsen, L. O. E., 230,  
 238  
 Koch, A., 592  
 Koch, M. B., 194  
 Kochakian, C. D., 81, 244  
 Kodama, S., 328  
 Kodd, W. F., 106  
 Kodicek, E., 107, 112  
 Koehlin, B., 460  
 Koelb, G. B., 458  
 Koelle, F. S., 227  
 Koelle, G. B., 490  
 Koelsche, G. A., 653, 654,  
 655  
 Koenig, H., 461  
 Koenig, V. L., 76  
 Koepf, G. F., 583, 654  
 Kogut, B., 285, 446  
 Koh, A., 8  
 Kohlstaedt, G., 279  
 Kohn, R., 201  
 Kolb, L. C., 175  
 Koletsky, S., 301  
 Kolff, W. J., 247  
 Kolín, A., 319  
 Koller, F., 90  
 Kollros, J. J., 305, 517  
 Kolm, R., 393  
 Kolmer, H., 564  
 Komorov, S. A., 201, 204,  
 206, 641  
 Kondo, B., 177, 318, 273,  
 319  
 Koneff, A., 58  
 Konorski, J., 564  
 Koop, C. E., 309  
 Kopala, J., 439  
 Kopeloff, L. M., 517  
 Kopeloff, N., 517  
 Korenyi, Z., 154  
 Kornberg, A., 74, 315  
 Kornberg, S. R. S., 661  
 Kornmüller, A. E., 517  
 Kosman, A. J., 140, 141  
 Kotte, J. H., 257  
 Kottke, F. J., 170, 235,  
 289  
 Kourilsky, R., 383, 384,  
 400  
 Krahil, V. E., 103  
 Krakower, C. G., 244  
 Kollros, J. J., 517  
 Kramer, B., 105, 106  
 Kramer, H., 338

Kramer, K., 375  
 Kramer, S. D., 343, 660  
 Krampitz, L. O., 112  
 Krasnow, F., 196  
 Krasovitskaya, S. E., 364  
 Krayer, O., 317, 318, 478  
 Kreps, E. M., 364  
 Krewer, S. E., 585  
 Krichesky, B., 57, 643  
 Krieger, V. I., 60, 398  
 Krieg, W. J. S., 529, 533, 548  
 Krogh, A., 129, 130, 131, 374, 581, 587, 590, 591, 592, 593, 596  
 Kronenberg, G., 182  
 Krop, S., 317  
 Kruger, H. E., 279, 391, 586  
 Kruhoffer, P., 401, 587  
 Kübel, W., 587  
 Kubicek, W. G., 170, 235, 289  
 Kubie, L. K., 571, 572  
 Kuester, K. E., 314  
 Kuffler, S. W., 133, 136, 463, 464, 465, 467, 486, 495, 500, 501  
 Kugelberg, E., 461, 486, 557  
 Kuhn, B. H., 518  
 Kuhn, R., 11, 27  
 Kuizenga, M. H., 78, 84, 89  
 Kulsavage, R. L., 74  
 Kunkle, E. C., 561  
 Kuntz, A., 164, 174, 183, 556  
 Kupalov, P. S., 131  
 Kupperman, H. S., 58, 61  
 Kurtz, I. J., 209  
 Kurzrok, R., 26, 54  
 Kuyper, A. C., 106  
 Kyser, F. A., 317

## L

Laake, H., 227  
 La Bella, L. O., 207  
 Labriola, R., 305  
 Lackey, R. W., 315  
 Lacomme, M., 61  
 La Cour, L. F., 610  
 Lacroix, P., 4, 103, 104  
 Ladell, W. S. S., 82, 196, 386, 392  
 Ladkowski, M., 202  
 La Due, J. S., 310

Laestar, C. H., 284, 401, 402  
 Lagerlof, H., 212  
 Lalich, J. J., 641  
 Lallemand, S., 36  
 Lamanna, C., 635  
 Lambert, E., 653  
 Lambert, E. H., 416, 420  
 Lambert, P. P., 317  
 Lambrechts, A., 400, 582  
 Lampport, H., 264  
 Lan, T. H., 234  
 Landauer, W., 36, 41, 108, 110, 624  
 Landis, E. M., 239, 240, 275, 310, 402, 581  
 Landowne, M., 226, 433  
 Lands, A. M., 651, 652  
 Landsteiner, E. K., 333  
 Landsteiner, K., 630, 631, 632, 633, 634, 635, 638  
 Landwehr, G., 230  
 Lang, E. H., 36  
 Lange, K., 416  
 Langendorf, R., 310  
 Langenskold, A., 195  
 Langeron, M. L., 231  
 Langley, L. L., 430  
 Langworthy, O. R., 175  
 Lanier, R., 149  
 Lankford, E., 656  
 Lansing, A. I., 439  
 LaPlace, L. B., 271  
 Lardon, A., 78  
 Lardy, H. A., 21  
 Laren, C. D., 244  
 Largent, E. J., 110  
 Larget, P., 400  
 Larrabee, M. G., 177, 435, 439, 470, 485  
 Larsell, O., 540  
 Larson, L., 155  
 Larson, P. S., 155  
 Larson, R. H., 622  
 Lasek, A. M., 459, 539  
 Last, J. H., 416  
 Last, M. R., 654, 655  
 Laszle, D., 11  
 Laszt, L., 358, 446  
 Latham, D. E., 156  
 Lauber, F. U., 204  
 Lauffer, M. A., 632, 636  
 Lauson, H. D., 263, 280, 347  
 Lavin, G. I., 3, 20, 141  
 Lavollay, J., 586  
 Lavrentiev, B. I., 167, 303  
 Lawrence, A. S. C., 127

Lawrence, J. H., 366, 370, 435, 437, 438, 439  
 Lawson, H., 307, 401  
 Lawson, H. D., 319  
 Lawton, A. H., 642, 658  
 Layton, I. C., 318  
 Lazarow, A., 92  
 Lazcano Gonzalez, J. M., 61  
 Leão, A. A., 512, 513  
 Learner, N., 215  
 Leath, M. J., 71  
 Leathem, J. H., 55, 56, 60, 62, 73, 81, 82  
 Leben, C. C., 615  
 LeBlanc, M., 305  
 Leblond, C. P., 70, 72, 81  
 Le Breton, E., 394  
 Lecercle, 164  
 Lecoq, R., 112  
 Lederberg, J., 613  
 Lederer, L. G., 370, 440  
 Leduc, L., 237, 239  
 Lee, D. H. K., 423  
 Lee, H. M., 651  
 Lee, M. O., 76  
 Lee, R. E., 282  
 Leech, R. S., 89, 92  
 Lefco, T., 235  
 Lefebvre, J., 654  
 Le Fevre, P. G., 28  
 Lefkowitz, W., 106  
 Lefkowitz, W., 103  
 Le Gros Clark, W. E., 141  
 Lehman, A. J., 651  
 Lehmann, F. E., 19, 28  
 Lehmann, G., 151, 651, 652, 653, 655  
 Leifer, W., 656  
 Lein, A., 371, 446  
 Leiner, G. C., 389  
 Leiner, M., 363  
 Leiter, L., 73  
 Leiter, S. S., 586  
 Leksell, L., 137, 166, 494, 566  
 Leksell, Z., 464  
 Lemen, J. W., 91  
 Lenegre, J., 305  
 Lennette, E. H., 164  
 Lennox, M. A., 509, 510, 511, 517, 520, 521  
 Lennox, W. G., 361, 362, 509, 511, 517, 520  
 Leo, S. D., 310  
 Leonard, S. L., 26, 54  
 LePage, G. A., 315  
 Lepeschkin, W. W., 587  
 Lequime, S., 310, 315

- Leriche, R., 103  
 Lering, S. W., 195  
 Lerner, S. R., 70  
 Lettre, H., 12  
 Leuchtenberger, C., 11  
 Leuchtenberger, R., 11  
 Leucutia, T., 62  
 Leulier, A., 106  
 Levander, G., 4, 104  
 Levenson, S. M., 393  
 Leverton, R. M., 360  
 Levi, H., 593  
 Levin, L., 84  
 Levin, S., 517, 518  
 Levine, M., 12  
 Levine, P., 618  
 Levine, R., 85  
 Levine, S. Z., 387  
 Levinson, J. P., 281  
 Levy, M., 74  
 Levy, R. L., 257, 289  
 Levy, S. E., 232  
 Lewes, D., 313  
 Lewey, F. H., 435  
 Lewis, G. K., 360  
 Lewis, J. H., 333, 616  
 Lewis, L., 90  
 Lewis, L. G., 175  
 Lewis, R. A., 434  
 Lewis, R. N., 265, 266, 268, 269, 271, 280, 281, 285  
 Lewis, T., 312, 557, 558, 562, 563  
 Lewis, T. H. C., 92  
 Lewis, W. H., 3  
 Lewisohn, R., 11  
 L'Heritier, P., 616  
 Li, C. H., 70, 75, 77, 78, 89, 108  
 Li, Tsan-Wen, 206, 244  
 Lian, C., 318  
 Liang, T. Y., 77, 84  
 Liberson, W. T., 518, 519, 520  
 Lichtman, A. L., 213  
 Libert, B., 478, 498  
 Liddell, H. S., 569, 570, 572, 575, 576, 578  
 Lidman, B. I., 317  
 Liebenow, R. R., 305  
 Lieberman, S., 79  
 Lieberman, E., 23  
 Liebmann, A. J., 643  
 Liebow, I. M., 259, 277, 279, 280  
 Liechti, A., 592  
 Lifson, N., 218, 315, 388, 595  
 Light, R. A., 232  
 Liles, G. W., 529  
 Lillenthal, H., 12  
 Lillenthal, J. L., Jr., 158, 361, 366, 372, 373, 434, 444, 446  
 Liling, M., 384, 385, 396  
 Liljencrantz, E., 369  
 Liljestrand, G., 177, 272  
 Lillie, R. D., 9, 284, 642, 664, 666  
 Lilly, J. C., 359, 448  
 Limarzi, L. R., 74  
 Lindahl, O., 227, 228, 229  
 Lindahl, P. E., 29, 142  
 Lindberg, A., 591  
 Lindberg, A. L., 131  
 Lindberg, O., 27  
 Linderström-Lang, K., 19, 328  
 Lindgren, A. J., 168, 314  
 Lindgren, C. C., 607, 613  
 Lindhard, J., 133, 153  
 Lindner, E., 586  
 Lindsay, J. S. B., 566  
 Lindstrom, K., 655  
 Lindvall, S., 25, 26  
 Linton, M. A., 77  
 Lipman, E., 156  
 Lippman, H. N., 108, 109  
 Lipschitz, W. L., 394  
 Lipschutz, A., 58  
 Linquette, 654  
 Lisa, J. R., 318  
 Lissak, K., 132  
 Little, J. M., 237  
 Little, T. M., 622  
 Littrell, J. L., 57  
 Livezey, M. M., 312  
 Livingston, W. K., 564, 565, 566  
 Livingstone, H. M., 446  
 Lizarralde, E., 315  
 Ljubimova, M. N., 127  
 Lloyd, D. P. C., 471, 499  
 Lobitz, W. C., 391  
 Lobo, B. A., 60  
 Loeb, E. N., 83, 245  
 Loeb, L., 605  
 Loeb, R. F., 236, 591  
 Loew, E. R., 652, 653, 654, 655  
 Loewe, L., 302, 416  
 Loewi, O., 134, 176, 478, 493, 507, 513  
 Löfgren, B., 593  
 Logan, G. B., 653, 654, 655  
 Logan, M., 362  
 Logan, M. A., 103, 106, 640  
 Logan, W. A., 35  
 Logue, R. B., 310, 314  
 Lohmann, K., 129  
 Lohrey, R. C., 661  
 Lokis, L. H., 239  
 Lönegren, H., 589  
 Long, C. N. H., 77, 84  
 Long, W. P., 78  
 Longe, K., 585  
 Longmire, W. P., 197  
 Loomis, D., 235  
 Loomis, E. C., 336  
 Loomis, T. A., 583  
 Loomis, W. E., 597  
 Looney, J. M., 87, 361  
 Loosjes, R., 597  
 Lopes De Faria, 62  
 Lopez, *see also* Vasquez-Lopez, E.  
 Lorber, V., 315  
 Lord, J. W., 170, 171  
 Lorente de N6, R., 467, 470, 472, 490, 496, 594  
 Loring, H. S., 614  
 Losch, P. K., 333  
 Lotmar, W., 126  
 Lotspeich, W. D., 229  
 Loubatieres, A., 86  
 Louis, L., 88  
 Louis, L. H., 392, 421  
 Lowe, R. C., 595  
 Lowell, A., 236, 245  
 Löwenbach, H., 125, 518, 520  
 Lowerstein, B. E., 226, 281, 282  
 Lowrey, J. J., 333  
 Lowry, O. H., 358, 590  
 Lowry, P. T., 91  
 Lozner, E. L., 333, 336, 348  
 Lubin, A. J., 539  
 Lubinska, L., 564  
 Lublin, A., 207  
 Lucas, J. T., 140  
 Lucchesi, M., 204  
 Lucchesi, O., 204  
 Luck, J. M., 349, 350  
 Lucio, I. V., 132, 134  
 Ludany, G., 588  
 Ludford, R. J., 662  
 Ludwig, B. S., 656  
 Ludwig, D., 390, 391  
 Luetscher, J. A., 243  
 Luetscher, J. A., Jr., 327, 329, 344, 348  
 Luft, R., 82

Luisada, A. A., 172, 263  
 Lukens, F. D. W., 89, 244  
 Lum, F. G., 349, 350  
 Lund, C. C., 393  
 Lund, C. G., 596  
 Lund, D. W., 437  
 Lund, P. K., 3, 4  
 Lundberg-Broman, A. M., 584  
 Lundegardh, H., 597  
 Lundin, G., 126  
 Lundquist, F., 229, 584  
 Lundsgaard, E., 587  
 Lurie, H. I., 369, 431  
 Luscher, M., 28, 37  
 Luse, S., 518  
 Lwoff, M., 654  
 Lyall, A., 112  
 Lyman, C. P., 591  
 Lyman, R. A., Jr., 593  
 Lyons, R. H., 283, 386, 401  
 Lyons, W. R., 58, 370, 438  
 Lyster, S., 78  
 Lythgoe, B., 129

## M

McArdle, B., 437  
 Macaulay, L. J., 565  
 McCance, R. A., 237, 381, 395, 422, 664  
 McCann, C., 77  
 McCarrell, J. D., 285  
 McCarter, R. H., 508  
 McCarthy, E. F., 360, 374  
 McCarty, M., 612, 635  
 McChesney, E. W., 74  
 McClendon, J. F., 214  
 McClosky, W. T., 664, 666  
 McClure, F. J., 195  
 McClurkin, T., 374  
 McCollum, E. V., 110  
 McCormack, G., 54, 61  
 McCouch, G. P., 472  
 McCrea, F. R., 281  
 McCulloch, R. N., 660  
 McCulloch, W. S., 358, 436, 500, 515, 533, 534, 535, 540  
 McDermott, K., 634  
 McDermott, W., 194, 641  
 MacDonald, A. H., 333  
 McDonald, I. W., 664  
 McDonald, J. R., 209  
 McDonald, M. R., 72, 109  
 MacDonnell, E., 596  
 MacDougald, T. C., 236, 592  
 MacDowell, E. C., 623  
 MacDowell, R. J. S., 314  
 MacDuffie, K., 314  
 Mace, L. M., 213  
 McElin, T. W., 201, 653, 654, 655  
 McElroy, O. E., 635  
 McElroy, W. D., 290, 368, 437  
 McFarland, J., 2  
 McFarland, R. A., 87, 433, 366, 369, 372  
 McFarland, S. W., 159  
 McFarlane, A. S., 329, 335  
 McGavack, T. H., 73, 74, 201, 654  
 McGinty, D. A., 72, 336  
 McGowan, J. C., 657  
 McGraw, J. J., 329, 348  
 McGuckin, W. F., 78  
 McGuinness, A. C., 342, 348  
 Machado, A. L., 134  
 McHale, K., 126  
 MacHatton, R. M., 657  
 McHenry, E. W., 401  
 Machle, W., 110  
 Machon, 654  
 Macht, M. B., 546  
 McIndoo, N. E., 166  
 McIntyre, A. R., 139, 517  
 Mackay, E. M., 239, 588  
 Mackay, I. F. S., 174, 211  
 McKee, C. M., 611  
 McKee, F. W., 85  
 McKenzie, B. F., 78  
 MacKenzie, C. C., 256  
 MacKenzie, C. G., 371, 432  
 Mackey, C. O., 419  
 McKibbin, J. M., 349  
 McKinsty, D. W., 660  
 Mackintosh, N. A., 53  
 Macklin, C. C., 263, 444  
 MacLachlan, E. A., 77  
 MacLachlan, P. L., 431  
 McLean, F. C., 103, 106  
 McLean, I. W., Jr., 636  
 McLean, R., 422  
 MacLeod, C. M., 337, 635  
 MacLeod, J., 55  
 McLetchie, N. G. B., 243  
 McLimans, W. F., 659  
 McLin, T. R., 286, 518  
 McManus, M. J., 309  
 McMeekan, C. P., 110  
 McMeekin, T. L., 329  
 McMichael, J., 169, 175, 275  
 MacMillan, R., 652, 654, 655  
 McNaughton, F. L., 518  
 McNeil, C., 636  
 Macovski, E., 587  
 McPheeters, H. O., 171  
 MacPherson, C. F. C., 634  
 MacQuaide, D. H. G., 392  
 McQuarrie, I., 381  
 McShan, W. H., 56, 70  
 McSwiney, B. A., 256, 272  
 Maculla, E., 383  
 Macy, I. G., 62, 75  
 Madrid, R., 595  
 Maes, J. P., 226, 227, 231, 235  
 Magnus, W. O. C., 179  
 Magoun, H. W., 180, 182, 471, 500, 536, 538, 540, 545, 546  
 Mahoney, C. G., *see also* de Gutierrez, C. G.  
 Mahoney, E. B., 346  
 Maier, J., 659  
 Major, R. H., 641  
 Maksimov, N. A., 593  
 Malcolm, J. L., 464, 466, 470, 496, 498  
 Maling, H. M., 471, 546, 547  
 Malinin, A. I., 593  
 Malinow, M. R., 177, 273, 319  
 Mallet-Guy, P., 172, 173, 174  
 Malkiel, S., 634  
 Malm, M., 260  
 Malmejac, J., 239, 394  
 Malmo, R. B., 432  
 Malone, P. D., 88, 383  
 Maltby, A. B., 257  
 Malting, H. M., 317  
 Mamil, M., 150  
 Mampell, K., 607  
 Man, E. B., 72  
 Mandel, H. S., 60  
 Mandel, S., 587  
 Manery, J. F., 129  
 Manfredi, J. F., 74  
 Mangelsdorf, P. C., 615  
 Mann, C. W., 74  
 Mann, F. C., 262, 281, 285, 653  
 Mann, F. D., 309  
 Mann, T., 21, 54, 134, 456

- Manning, G. W., 259, 431  
 Manrique Izquieta, J., 284, 310  
 Mantz, F. R., 401  
 Marandet, J., 393  
 Marazzi, A. S., 494  
 Marbarger, J. P., 371, 419, 443  
 March, B. S., 122  
 Marchal, G., 172  
 Marchlis, L., 597  
 Marconi, F., 201  
 Mares, G., 317  
 Marine, D., 73, 397  
 Marinelli, L. D., 73  
 Marion, P., 174  
 Maris, E. P., 341, 632, 640  
 Markee, J. E., 58, 125, 181  
 Marmont, G., 464, 501  
 Marrack, J. R., 637  
 Marrian, G. F., 644  
 Marrus, J., 416  
 Marsh, D. F., 434  
 Marsh, M. E., 197  
 Marshall, L. H., 389, 390  
 Marshall, R. A., 193, 588  
 Marshall, W. H., 530  
 Martin, C. J., 327  
 Martin, G. J., 202, 641  
 Martin, J. F., 174  
 Martin, R. C., 446  
 Martin-Poggi, R., 104, 107  
 Martinez, A. N., 152, 313  
 Marx, L., 62  
 Marx, W., 79, 108, 586  
 Mary, L., 656  
 Marzulli, F. N., 432, 438  
 Mason, A., 134  
 Mason, E. C., 403  
 Mason, G., 79  
 Mason, H. L., 79  
 Mason, K. E., 62  
 Mason, M. F., 235, 375  
 Masserman, J. H., 570, 572, 573, 574, 578  
 Master, A. M., 314  
 Mathe, H., 192  
 Mather, K., 615, 617  
 Mathews, M. W., 168  
 Mathieson, D., 654, 655  
 Mathieson, D. R., 57, 385  
 Matrone, G., 615  
 Matthews, B. H. C., 290, 369, 464, 467, 497, 498  
 Mattox, V. R., 78  
 Mautz, F. R., 401  
 Maxwell, H. D., 440  
 Maxwell, H. P., 261  
 May, H., 5  
 May, J., 358  
 May, L. G., 73  
 Mayer, R. A., 657  
 Mayer, R. L., 654, 657  
 Mayerson, H. J., 286  
 Mayerson, H. S., 152, 360, 440  
 Mayfield, F. H., 564, 565  
 Mayne, A., 363  
 Mayr, E., 618  
 Meade, R. H., 275  
 Means, J. H., 71  
 Medawar, P. B., 11  
 Medes, G., 8, 234  
 Medlicott, M., 110  
 Medoff, H. S., 182, 235, 289  
 Meehan, J. P., 402, 431  
 Meek, W. J., 191, 305  
 Meier, R., 272  
 Meiklejohn, G., 661  
 Meisinger, G. F., 255  
 Meister, A., 128  
 Melin, M., 329, 334, 335, 336, 337, 338, 339, 340, 343, 344, 345  
 Mellanby, E., 111  
 Melon, J., 103, 105  
 Melville, E. V., 398  
 Melville, F., 141  
 Melville, K. I., 305, 306  
 Melvin, J. P., Jr., 392  
 Membrives, *see also* Re-forzo-Membrives, J.  
 Menedez, A., 194  
 Meneely, G. R., 281, 595  
 Mengert, W. F., 60  
 Menken, V., 629  
 Menninger, K., 159  
 Menten, M. L., 365  
 Meranze, D., 206  
 Merino, C., 431  
 Merlen, J., 318  
 Merrell, M., 585  
 Merrill, A. J., 238, 262, 275, 280, 286, 308, 309, 347  
 Merschkov, A. G., 445  
 Mertens, E., 633  
 Merwin, R., 28  
 Mesrobian, I., 635  
 Mesrobian, L., 635  
 Messerschmidt, J., 108  
 Mettler, F. A., 548  
 Metz, C. B., 25, 26  
 Meulengracht, E., 74  
 Meyer, A., 111  
 Meyer, F. L., 401  
 Meyer, J., 197  
 Meyer, K. G., 594  
 Meyer, K. H., 483, 592  
 Meyer, R. K., 56, 58, 70  
 Meyerhof, O., 128  
 Meyers, W., 90  
 Mezinisco, E., 176  
 Michaelis, H. F., 150, 151  
 Michaels, J. J., 519  
 Michelle, G., 432  
 Middleton, S., 279, 314  
 Mignot, A., 383  
 Milanes, F., 194  
 Milla, E., 137  
 Miller, A. A., 61, 88, 583  
 Miller, A. M., 79  
 Miller, C. P., 612  
 Miller, E., 56, 244  
 Miller, E. C., 642  
 Miller, E. W., 623  
 Miller, G. E., 654  
 Miller, H. C., 591  
 Miller, H. R., 371, 416  
 Miller, J. A., 630, 642  
 Miller, M., 61  
 Miller, M., 313  
 Miller, M. M., 516  
 Miller, P. A., 640  
 Miller, R. A., 437  
 Miller, S. G., 335  
 Miller, V. C., 155, 313  
 Miller, W. H., 70, 72  
 Millikan, G. A., 358, 369, 375, 448  
 Mills, C. A., 422  
 Mills, W. G., 657  
 Milowsky, J. L., 564, 565  
 Minami, H., 570, 576  
 Minard, D., 653  
 Minatoya, H. H., 235  
 Minkin, S. J., 564, 565  
 Minnich, V., 194  
 Minot, G. R., 333, 616  
 Mintz, B., 56  
 Mintz, S. S., 318  
 Mintzberg, J., 83  
 Miquel, O., 317  
 Mirault-Kretschmar, M., 205  
 Mirsky, A., 156  
 Mirsky, A. C., 245  
 Mirsky, A. E., 20  
 Mirsky, I. A., 85, 91  
 Missal, M. E., 310  
 Mitchell, F., 230  
 Mitchell, H. H., 416, 420, 421, 422  
 Mitchell, H. K., 614



- Mitchell, P. D.,  
 Mitchison, A. N., 617  
 Mitra, S. N., 658  
 Modell, W., 237  
 Moench, L., 653  
 Moersch, R. U., 200  
 Moffett, R. B., 78  
 Moguel, *see also* Barrojo  
   Moguel, R.  
 Mohn, J. F., 619  
 Mohney, J., 448  
 Mokotoff, R., 302  
 Molander, D., 91  
 Moldaver, J., 466, 467,  
   468, 469, 470  
 Mole, R. H., 360  
 Mollaret, P., 546  
 Molle, W. E., 274  
 Molnar, G. W., 392, 415  
 Mommaerts, W. F. H. M.,  
   128  
 Monaco, A. R., 642  
 Monahan, E. P., 75, 108  
 Money, W. L., 58, 60  
 Monge, C., 369  
 Monne, L., 23, 24, 27  
 Monnier, A. M., 121, 474,  
   494  
 Monroy, A., 24, 27, 29  
 Montagu, *see also* Ashley  
   Montagu, M. F.  
 Montalenti, G., 22, 25  
 Montandon, A., 183  
 Montgomery, M. L., 211  
 Moog, F., 20, 24, 35, 38,  
   106  
 Moore, A. R., 30  
 Moore, A. U., 570, 576  
 Moore, B. E., 182  
 Moore, C. E., 5  
 Moore, C. R., 36, 57  
 Moore, D. H., 128, 621,  
   631, 632, 639  
 Moore, F. D., 71, 74, 173,  
   209, 350, 400, 586  
 Moore, J. A., 40, 41, 618  
 Moore, J. L., 387  
 Moore, M., 78  
 Moore, P. T., 129, 131,  
   590, 591  
 Moore, R. L., 366  
 Moore, R. M., 363  
 Moore, T., 111  
 Moore, V., 653, 654, 655  
 Moragnes, V., 659  
 Morales, F., *see also* Her-  
   andez-Morales, F.)  
 Morales, M., 446  
 Moratschek, J., 587  
 Mordy, M., 155, 156  
 Moreira, M., 421  
 Morgan, A. F., 112  
 Morgan, C. F., 57  
 Morgan, H. R., 661  
 Morgan, L. O., 165  
 Morgan, T. H., 26  
 Morgan, V. E., 327  
 Morgan, W. T. J., 635,  
   636, 639  
 Moricard, F., 51  
 Morin, G., 403  
 Morison, R. S., 500, 510,  
   514, 531  
 Moritz, A. R., 416, 422,  
   444  
 Morlock, C. G., 200  
 Morris, H. C., 654, 655  
 Morris, M. L., 63  
 Morrissey, R. A., 343  
 Morrison, L. M., 208  
 Morrison, L. R., 430  
 Morrison, P. R., 332  
 Morrow, A. G., 61  
 Mortensen, R. A., 593  
 Morton, J. H., 74  
 Morton, T. C., 386, 392  
 Moruzzi, G., 542  
 Moseley, R. W., 73  
 Moser, H., 564  
 Moser, L., 583  
 Mossman, H. W., 56  
 Mourant, A. E., 619, 620  
 Mourgue, M., 104, 105,  
   106, 107  
 Moustgaard, J., 226  
 Motley, H. E., 272  
 Motley, H. L., 438  
 Mott, C. R., 303, 304  
 Movin, R., 236  
 Movitt, E., 402, 431, 444  
 Movitt, E. R., 310, 317  
 Moyer, C. A., 384, 387  
 Moyer, E. Z., 75  
 Mozhaeva, L. V., 593  
 Mudd, S., 329, 632, 633,  
   639  
 Mueller, J. H., 640  
 Muido, L., 155  
 Mulford, D. J., 8, 329,  
   336, 343, 344, 345  
 Mulholland, H. F., 371,  
   433  
 Mulholland, J. H., 207  
 Mulinos, M. G., 383  
 Müller, A., 150, 444  
 Müller, E. A., 150, 151  
 Müller, H. R., 179, 180  
 Mulligan, R. M., 360  
 Mullins, L. J., 130, 308,  
   433, 445  
 Munch-Petersenn, J., 203  
 Munck, W., 302  
 Munro, M. P., 211  
 Muntwyler, E., 401  
 Murphy, A. J., 358  
 Murphy, J. P., 165, 180,  
   182, 183, 510, 511, 536,  
   538  
 Murray, E. S., 659, 660  
 Murray, J., 518  
 Murray, M. M., 110  
 Murray, P. D. F., 112  
 Murray, R. E., 423  
 Murtagh, J. A., 446  
 Mushett, C. W., 396  
 Mussnug, G., 587  
 Myers, H. L., 390  
 Myers, L., 92  
 Mylon, E., 283, 284, 285,  
   584  
  

**N**

 Nachmansohn, D., 134,  
   457, 458, 459, 478, 489,  
   490, 491, 492, 493  
 Nagy, E. K., 132  
 Nagy, *see also* Suto-Nagy,  
   C. J.  
 Nahum, L. H., 312  
 Nakamura, A. I., 63  
 Nalbandov, A., 20  
 Nasanov, D. N., 581  
 Nash, L., 651, 652  
 Nasio, J., 207  
 Nath, M. C., 87, 89  
 Nathanson, I. T., 79, 284  
 Nathanson, M. H., 177,  
   273  
 Nauta, W. J. H., 181  
 Nauts, H. C., 12  
 Necheles, H., 173, 197,  
   651  
 Needham, D. M., 127  
 Needham, J., 127  
 Neefe, J. R., 343, 632  
 Neff, W. B., 430  
 Negovski, V. A., 446  
 Negri, A., 315  
 Neher, B. H., 23, 55  
 Neisiger, J. R., 416  
 Nelsen, O. E., 53, 54  
 Nelson, E. M., 422  
 Nelson, J. W., 78, 87, 178,  
   434  
 Nelson, N., 382, 391, 392,  
   418, 419

Nelson, W. O., 55, 56, 58  
 Ness, A. T., 658  
 Netsky, M. G., 586  
 Nettleship, A., 623, 661  
 Neuberger, A., 110  
 Neufeld, A. H., 108  
 Neumann, C., 169  
 Neurath, H., 344  
 Neurath, O., 317  
 Neuweiler, W., 583  
 Neuwelt, F., 651  
 Neveu, P., 311  
 Newhouser, L. R., 346, 347, 348  
 Newman, E. S., 327  
 Newman, E. V., 401  
 Newton, M., 613  
 Newton, W. H., 59, 103, 106  
 Nicholl, W., 235  
 Nichols, D. R., 583  
 Nichols, S., 199, 219  
 Nickerson, J. L., 308, 382, 401, 402, 422  
 Nickerson, M., 40  
 Nickerson, N. D., 265, 266, 268, 269, 271, 280, 285  
 Nicol, J. A. C., 497  
 Nicoli, P. A., 261  
 Nicolle, P., 654  
 Nielsen, K., 81  
 Nielsen, M., 150, 239, 369, 420, 422  
 Nielsen, *see also* Schmidt-Nielsen, B.  
 Nieto, D., 165  
 Nieuwkoop, P. D., 33  
 Niggli, H., 605  
 Nims, L. F., 361, 362, 430  
 Niven, J. I., 87, 366, 372, 433  
 Nixon, E. N., 178  
 Nixon, W. L., 71  
 Noback, C. R., 59  
 Noble, R. P., 278, 280, 347  
 Noda, L., 234  
 Noell, W., 261  
 Noojin, R. O., 518  
 Noonan, T. R., 130, 591  
 Norberg, B., 358  
 Norden, A., 200  
 Norman, R. M., 531  
 Norris, L. C., 110  
 Northrup, D. W., 198, 214  
 Northrop, J. H., 632  
 Novelo, S., 311  
 Nowinski, W. W., 71

Nungester, W. J., 660  
 Nutman, P. S., 623  
 Nutt, A. L., 284  
 Nutt, M. E., 230, 396  
 Nylin, G., 260, 313  
 Nyman, E., 652

## O

Oakberg, E. F., 622  
 Oakley, W. G., 89  
 Oberholzer, R., 113  
 Oberholzer, R. J. H., 177, 443  
 Obrador Alcalde, S., 168  
 O'Brien, M. F., 590  
 O'Connor, W. J., 239, 399  
 Oddo, A. M., 24  
 Odell, F. A., 438  
 O'Donnell, C. H., 171  
 Odoriz, J. B., 74, 516  
 Offner, F., 486  
 Ogden, E., 170, 202, 279, 287, 288, 290, 441  
 Ogden, G. E., 658  
 Ogilvie, R. F., 76, 85, 89  
 Ohlbaum, C., 620  
 Ohlson, A. S., 236  
 Ohlson, M. A., 360  
 Ohman, L. O., 27, 30  
 Oivin, I. A., 588  
 O'Leary, J., 533  
 O'Leary, P. A., 653, 654, 655  
 Oliver, J., 233, 241, 242, 245  
 Oliver-Gonzalez, J., 637, 657  
 Olmsted, J. M. D., 553  
 Olsen, N. S., 315  
 Olson, O. C., 447  
 Olson, W., 191  
 Olson, W. H., 173, 651  
 O'Malley, E., 593  
 Oncley, J. L., 327, 329, 334, 335, 336, 337, 338, 339, 340, 345, 631  
 Ondina, D., 59  
 Opdyke, D. F., 142, 264, 267, 276, 279, 280, 281, 282, 284  
 Opie, E. L., 3  
 Oppenheimer, J. M., 5, 36, 39  
 Oppenheimer, M. J., 215, 319  
 Opreanu, Z., 587  
 Orcley, J. L., 632, 640

Ordman, C. W., 341, 632, 640  
 Orellana, D., 61  
 Orias, O., 91, 305  
 Orr, T. G., 212  
 Ørskov, S. L., 582  
 Orstrom, A., 30  
 Orstrom, M., 30  
 Orth, O. S., 305  
 Osborne, J. W., 416  
 Osborne, S. L., 140, 141  
 Osborne, T. B., 328  
 Oscananza, F., 445  
 Osebold, J., 108  
 Osgood, C. W., 182  
 Osman, W. C., 301  
 Oster, R. H., 87, 372, 434  
 Osterberg, A. E., 210, 391  
 Osterhout, W. J. V., 593, 594  
 Ostow, M., 519  
 Ostow, M., 519  
 Oswald, A., 166  
 Otenasek, F. J., 163  
 Otis, A. B., 274, 308, 370, 371, 439, 444, 445, 448  
 Otto, R., 659  
 Overbey, D. T., 281  
 Overstreet, R., 597  
 Owen, E. C., 62, 72  
 Owen, F. V., 617  
 Owen, L. N., 664  
 Owen, R. D., 42, 620  
 Oyler, J. R., 371

## P

Pace, N., 366, 382, 400, 401  
 Pacella, B. L., 517, 520  
 Page, E. W., 290  
 Page, I. H., 169, 226, 242, 279, 280, 281, 282, 287, 289  
 Page, J. E., 640, 658  
 Paget, M., 231  
 Pai, M. L., 226  
 Painter, T. S., 22  
 Painton, J. F., 310  
 Palladin, A. V., 149  
 Palmer, G. H., 80, 584  
 Palmer, L. E., 361  
 Pannier, R., 272, 440, 442, 468  
 Panum, P., 327  
 Papanicolaou, G. N., 53  
 Pappenheimer, A. M., 108  
 Pappenheimer, J. R., 375, 435

- Paraf, A., 586  
 Pareto, V., 1  
 Parfentjev, I. A., 632  
 Park, R. G., 423  
 Parker, D., 591  
 Parker, J., 217  
 Parkes, A. S., 69, 72, 82  
 Parks, J., 583  
 Parmenter, R., 570, 575, 576  
 Parrot, J. L., 208, 563, 586, 654  
 Parson, W., 84, 104  
 Parsonnet, A. E., 306  
 Parsons, L. D., 662  
 Partridge, S. M., 635  
 Paschki, K. E., 73, 83  
 Pasqualini, C. Dosne De, 285  
 Pasqualini, R. Q., 397  
 Pasteels, J., 28, 36, 37  
 Pasternack, B., 284, 310  
 Pasztor, J., 132  
 Patch, E. A., 229, 230  
 Patek, A. J., 245  
 Patek, A. J., Jr., 333  
 Paterson, E., 14, 661  
 Pathman, J. H., 182  
 Patrick, H., 110  
 Patterson, J. M., 401  
 Patterson, J. T., 618  
 Patterson, T. L., 203  
 Pattle, R. E., 138  
 Patton, H. D., 531  
 Patwardhan, V. N., 112  
 Patzer, R., 171  
 Paul, J. R., 343  
 Pauling, L., 359, 632, 633, 634, 637, 638  
 Pavan, C., 609  
 Pavlov, I. P., 569, 570  
 Peacock, W., 71, 595  
 Pearce, E., 658  
 Pearlman, W. H., 643, 644  
 Pearson, A. K., 53  
 Pearson, H. E. S., 311  
 Pearson, O. P., 53  
 Pease, D. C., 290  
 Peck, S. M., 656  
 Peco, G., 260  
 Pecora, L. J., 366  
 Pedemonte, C. J., 260  
 Pedersen, A. M., 236  
 Pedersen, K. O., 335, 631, 637  
 Pedersen-Bjergaard, K., 596  
 Pederson, *see also* Wieth-Pederson, G.  
 Peeney, A. L. P., 217  
 Peet, M. M., 168, 170  
 Peglar, H., 60, 78  
 Pelow, A., 234  
 Peluffo, C. A., 636  
 Pembrey, M. S., 156  
 Pen, D. F., 129  
 Pennington, M., 178, 196  
 Pennybacker, J., 138  
 Peoples, S. A., 243  
 Pepper, J. H., 586  
 Peralta, R. B., 91, 315  
 Perdrup, A., 134  
 Pereira, A. De S., 166, 171  
 Perera, G. A., 236, 310  
 Perilhou, P., 560  
 Perkins, E., 243  
 Perkins, J. E., 343  
 Perkins, R. Z., 86, 87  
 Perlman, E., 639  
 Perlstein, D., 643  
 Perrot, J. L., 27  
 Perry, C. B., 236  
 Perryman, J. H., 595  
 Peshkoff, M. A., 610  
 Peterman, M., 632  
 Peterman, M. G., 311  
 Petermann, M. L., 339  
 Peters, J. P., 84, 381, 382, 387  
 Peters, M., 342  
 Petersen, H., 37  
 Petersen, W. F., 363  
 Peterson, C. G., 198, 314, 652  
 Peterson, D. R., 198, 314, 652  
 Peterson, O. L., 659  
 Petrov, I. R., 439  
 Pfab, B., 564  
 Pfaffman, C., 560  
 Pfeiffer, C. A., 56, 108  
 Pfeiffer, C. C., 654, 659, 664  
 Pfeiffer, D. C., 329  
 Phelps, D., 60  
 Phelps, K., 259  
 Phemister, D. B., 284, 401, 402  
 Philippides, D., 564, 565  
 Philips, F. S., 178, 305, 666  
 Phillips, P. H., 21  
 Phillips, D. M., 398  
 Phillips, F. S., 227  
 Phillips, R. A., 231, 232, 262, 280  
 Phillips, R. W., 51  
 Phillips, S., 438  
 Phillipson, A. T., 193, 588  
 Piacentini, V., 158  
 Piagentini, I., 30  
 Piatt, J., 34  
 Pick, E. P., 516  
 Pick, J., 164, 173  
 Picken, L. E. R., 126  
 Pickford, M., 240, 381, 398  
 Pickrell, J. L., 210  
 Pierce, H. B., 216  
 Pierce, J. G., 614  
 Pieron, H., 560  
 Pillemer, L., 336, 337, 635, 638  
 Pilling, M. A., 230, 630  
 Pinchot, G. B., 347  
 Pincus, G., 79, 82, 83, 643, 644  
 Pincus, J. J., 202  
 Pine, M. B., 366, 372, 434  
 Pinkerton, H., 659  
 Piotti, A., 311  
 Pirani, C. L., 74  
 Pirie, A., 113  
 Pitt Rivers, R. V., 69, 70  
 Pitts, G. C., 366, 383, 386  
 Pitts, R. F., 229, 256, 381, 589  
 Planques, D., 273  
 Plechkova, E. K., 303  
 Pleune, G. F., 422  
 Pliskin, R. R., 657  
 Plummer, N., 641  
 Pochon, J., 192  
 Podolsky, H. M., 206, 209  
 Poggioli, 177  
 Polayes, S. H., 620  
 Polderman, H., 285  
 Policard, A., 103, 106  
 Polis, B. D., 128  
 Polivka, H. R., 618  
 Pollister, A. W., 20, 21  
 Polonovski, M., 234, 237, 238, 239  
 Polowe, D., 212  
 Pomerene, E., 585  
 Ponce De Leon, H., 58  
 Ponder, E., 585  
 Pope, A., 284, 287  
 Popesco, M., 176  
 Popjak, G., 242  
 Popper, H., 8  
 Porter, E. L., 547, 565  
 Porter, R. J., 436  
 Porter, R. R., 390  
 Porto, J., 91  
 Postma, N., 119  
 Potor, A., 238

Potter, J. S., 623  
 Potter, T. S., 639  
 Potter, V. R., 129  
 Poulson, D. F., 41  
 Poumeau-Delille, G., 57  
 Powell, V. E., 391  
 Power, M. H., 385  
 Powers, J. H., 159  
 Pozo, E. C., 595  
 Prados, M., 516  
 Pratt, C. K., 657  
 Pratt, J. P., 62  
 Pratt-Thomas, H. R., 213  
 Prescott, K. F., 386, 397  
 Pressman, D., 634, 637, 638  
 Preston, M. I., 432  
 Price, F. L., 657  
 Price, W. H., 85, 128  
 Prickman, W. E., 653, 654, 655  
 Pride, M. P., 401  
 Prigonnikov, I. E., 564  
 Prinzmetal, M., 279, 281, 285, 286, 422  
 Pritchard, J. J., 59  
 Proctor, L. D., 520  
 Proemmel, D. D., 158, 358, 366, 372, 373  
 Proger, S., 315, 372  
 Prosser, C. L., 478  
 Pruitt, R. D., 310, 312, 318  
 Prutting, J. M., 651  
 Pryde, J., 54  
 Puhl, H., 564  
 Puppel, I. D., 70  
 Purnell, M. A., 634, 637  
 Purves, H. D., 666  
 Pusch, L. C., 5  
 Putnam, I. K., 533  
 Putnam, T. J., 533, 548  
 Pybus, F. C., 623  
 Pyles, W. J., 658

## Q

Qualife, M. L., 62  
 Quinby, W. C., 287, 333  
 Quinn, C., 443  
 Quinn, G. F., 314  
 Quintella, R., 416

## R

Raab, D. H., 533, 538  
 Raab, W. 74, 316  
 Raaf, J., 518

Raaschou, F., 228, 230, 238, 239, 384, 395, 396  
 Race, G. A., 318  
 Race, R. R., 619, 620, 633  
 Radike, M., 70  
 Radzow, K. H., 265  
 Rafferty, J. A., 365  
 Raffler, K., 564  
 Rahn, H., 274, 308, 370, 371, 439, 444, 445, 448  
 Raimondi, P. J., 207  
 Rainsford, S. G., 369  
 Rakoff, A. E., 60, 73, 83  
 Rall, J. E., 196, 443  
 Ralli, E. P., 82, 240  
 Ralston, H. J., 259, 264, 279  
 Ramamurti, K., 25  
 Rambach, W. A., Jr., 401  
 Ramos, J. G., 312, 469, 472  
 Ramsay, W. N. M., 365  
 Ramsey, F. M., 158  
 Ramsey, R. W., 120, 123, 284  
 Ramsey, V. W., 140, 141  
 Ramsroop, A., 424  
 Randall, C., 421  
 Randall, S. S., 69  
 Randall, W. C., 259, 391  
 Randolph, L. F., 615  
 Ranges, H. A., 226, 363  
 Rankin, R. M., 585  
 Rannefeld, A. N., 91  
 Ranseen, E. L., 157  
 Ranzi, S., 30, 36  
 Ranzi, S. C. S., 35, *see also* Ranzi, S.  
 Rapela, C. E., 82  
 Rapoport, S., 362  
 Rapport, D., 71, 91, 283, 284  
 Rasberry, E. A., 218  
 Rascoff, H., 285, 446  
 Rashevsky, N., 264, 265  
 Rashkind, W. J., 169, 273  
 Raska, S. B., 234  
 Rasmussen, T. B., 564, 565  
 Rathbun, E. N., 400, 401  
 Ratnoff, O. D., 434  
 Rauch, V. M., 109  
 Ravault, P., 205  
 Raven, Chr. P., 19, 20, 25, 27, 33, 35, 36, 73  
 Ravitch, M. M., 197  
 Rawles, M. E., 40, 42  
 Rawson, R. W., 71  
 Ray, B. S., 562  
 Ray, G. B., 260  
 Ray, L. H., 260  
 Ray, O. M., 438  
 Raymond, A. L., 651  
 Read, H. S., 318  
 Reading, E. H., 660  
 Recarte, P., 277  
 Reddy, D. V. S., 445  
 Redisch, J., 226  
 Reece, R. P., 54  
 Reed, C. A., 51, 53  
 Reed, C. I., 585  
 Reed, G. M., 613  
 Reed, H. L., 474, 535  
 Reed, R., 53  
 Reed, R. K., 287  
 Reforzo-Membrives, J., 385  
 Rehm, W. S., 198, 307, 401, 483, 595, 596  
 Reichart, T., 565  
 Reichel, J., 329  
 Reichel, J., Jr., 348  
 Reichsman, F., 235, 236  
 Reichstein, T., 78  
 Reid, C., 246  
 Reidt, V., 84, 104  
 Reifenshtein, E. C., Jr., 77, 79, 84  
 Reilhes, R., 597  
 Reimann, S. P., 1, 5  
 Reineke, E. P., 69, 584  
 Reinhardt, W. O., 585  
 Reinoff, W. R., 210  
 Reiss, M., 60, 77, 78  
 Reitman, F., 182  
 Remington, J. W., 255, 256, 307, 308  
 Remond, A., 435  
 Remus Araico, J., 168  
 Rennick, B., 654  
 Renshaw, B., 465, 470, 471, 488, 494, 498, 499  
 Revol, L., 106  
 Rexed, B., 500, 547  
 Reynell, J., 509, 515  
 Reynolds, J. T., 213  
 Reynolds, M. E., 194  
 Reynolds, M. S., 360  
 Reynolds, O. E., 88  
 Rhines, E., 180  
 Rhines, R., 471, 536, 538, 540  
 Rhoads, C. P., 15  
 Ricca, R. A., 286, 422  
 Rice, K. K., 383  
 Rice, R. G., 350  
 Rich, A. R., 9  
 Richard, L. V., 653

- Richards, A. G., 586  
 Richards, A. J., 75  
 Richards, A. N., 228  
 Richards, B. W., 182  
 Richards, D. W., Jr., 275, 280, 308, 347, 363  
 Richards, G. A., 318  
 Richards, O. W., 19  
 Richards, R. K., 314, 653  
 Richardson, D., 76  
 Richert, D. A., 334, 335, 336, 337, 338, 339, 340  
 Richet, L., 208  
 Richins, C. A., 164, 165, 178, 210  
 Richter, C. P., 88, 163, 184, 383, 664, 666  
 Richter, D., 136  
 Rickard, E. R., 640  
 Ricketts, H. T., 433  
 Riddle, O., 72, 74, 109  
 Riddell, C. B., 71  
 Riddell, W. J. B., 113  
 Riddoch, G., 557, 565  
 Riechart, T., 564, 565  
 Riecker, H. H., 205  
 Riegel, B., 78  
 Riegel, C., 309  
 Riesen, A. H., 371, 432  
 Rieux, N., 583  
 Rieveschl, G., 655  
 Rigdon, R. H., 374, 432  
 Riggs, B. C., 364, 366, 436  
 Riggs, D. S., 72  
 Rijlant, P., 167, 305  
 Riker, W. F., Jr., 69, 317  
 Riley, E., 70  
 Riley, K. A., 518  
 Riley, R. L., 158, 280, 308, 347, 358, 361, 363, 366, 372, 373, 444, 446  
 Rimini, R., 277  
 Ring, J. R., 53, 391  
 Ringoan, A. R., 109  
 Rinieri, A., 654, 655  
 Ris, H., 23, 609  
 Riseman, J. E. F., 318  
 Riser, M., 273  
 Risley, T. C., 171  
 Risman, G. C., 53  
 Ritchie, A. E., 140, 171, 240, 398  
 Ritchie, T. W., 314  
 Rivers, A. B., 200  
 Roach, F. C., 31  
 Robb, J. S., 302  
 Robb, P., 557  
 Robbie, W. A., 20  
 Robbins, B. H., 305  
 Roberts, A., 74  
 Roberts, E., 621  
 Roberts, F., 278  
 Roberts, J. S., 53  
 Roberts, L. M., 86  
 Roberts, S., 247, 335  
 Robertson, H. F., 159  
 Robertson, J. D., 69, 70  
 Robinson, G. M., 11  
 Robinson, H. W., 215  
 Robinson, K., 423  
 Robinson, R., 11  
 Robinson, S., 153, 373, 374, 392, 418, 421, 422, 438, 439  
 Roblin, R. O., 72, 653  
 Robson, J. M., 605  
 Robson, J. S., 240  
 Rocha e Silva, M., 655  
 Roche, J., 104, 105, 106, 107  
 Rock, J., 51  
 Rockenmacher, M., 105, 106  
 Rodbard, S., 156, 432, 439  
 Roepke, R. R., 217, 218, 388, 389, 595  
 Roger, G. H., 12  
 Rogers, L., 518  
 Rogliano, F. T., 284  
 Rogoff, J. M., 178  
 Rollafs, E. W., 433  
 Rollason, H. D., 242  
 Rollé, R., 589  
 Roller, D., 586  
 Romanes, G. J., 166  
 Romano, J., 286, 513, 518, 520  
 Romanoff, A. L., 30  
 Ronan, A. K., 401  
 Ronkin, R. R., 155, 436  
 Ronnin, R. R., 157  
 Ronnow, G., 203  
 Root, G. T., 281, 285  
 Root, H. F., 89, 518  
 Root, W. S., 357, 359, 366, 435  
 Rosanoff, W. R., 519  
 Rose, A. R., 358  
 Rose, H. M., 657, 660  
 Rose, J. E., 530, 531  
 Rose, T. F., 423  
 Roseman, E., 273, 358, 436, 515, 517, 518, 535  
 Rosenberg, D. H., 310  
 Rosenblatt, P., 302, 416  
 Rosenbluth, A., 312, 467, 469, 472, 547, 595  
 Rosendal, T., 595  
 Rosenfeld, H., 656  
 Rosenow, E. C., 633  
 Rosenthal, S. M., 284, 285, 422  
 Rosenthal, S. R., 653  
 Rosin, S., 33  
 Roskin, G., 15  
 Ross, B. D., 447  
 Ross, E., 80  
 Ross, I. S., 519  
 Ross, W. D., 518  
 Rossman, I., 52  
 Rostorfer, H. H., 202, 374, 375, 432  
 Roth, J. A., 173, 202  
 Rothen, A., 632  
 Rothenberg, M. A., 73, 458, 478, 489, 490, 491, 492  
 Rothlin, E., 258, 259  
 Rothman, S., 390, 553, 656, 657  
 Rothschild, Lord, 27  
 Roufogalis, S., 191  
 Roughton, F. J. W., 357, 358, 359, 363, 364, 366, 367, 372, 435, 583  
 Rous, P., 1, 633  
 Rovenstine, E. A., 169, 285  
 Rowlands, I. W., 26, 55, 69  
 Rowley, E. M., 83  
 Roy, A., 107  
 Roy, D. N., 586  
 Royle, J. G., 11  
 Ruben, J. A., 90, 91  
 Rubin, B. L., 61  
 Ruch, T. C., 52, 520, 521, 531, 537, 548  
 Rudolph, M., *see also* Hut-ton-Rudolph, M.  
 Ruffiene, R., 195  
 Ruffo, A., 27  
 Rugh, R., 23, 57  
 Ruge, U., 583  
 Rule, C., 439  
 Rulon, O., 35, 36  
 Rumsey, C. C., Jr., 371, 433  
 Runnstrom, J., 23, 24, 25, 26, 27  
 Rusetsky, I. I., 564  
 Rushmer, R. F., 370  
 Rushton, W. A. H., 485, 488  
 Rusk, H. A., 159  
 Ruskin, A., 305  
 Russakoff, A. H., 9

Russek, H. I., 171  
 Russell, E. S., 623  
 Russell, H. D., 153, 417, 422  
 Russell, W. L., 35, 623  
 Russell, W. R., 529, 538  
 Russo, H. F., 229, 230  
 Ruth, H. S., 517  
 Rutherford, W. H., 387  
 Rutstein, D. D., 310, 342  
 Ryan, F. J., 613  
 Ryan, H. A., 157  
 Ryder, H. W., 274

## S

Sabin, F. R., 633  
 Saccomanno, G., 174  
 Sacerdote de Lustig, E., 111  
 Sacks, D. R., 310  
 Sacks, J., 582  
 Safford, H., 183  
 Safford, V., 374, 375  
 Saidel, L. J., 349  
 St. Clair, L. E., 58  
 Salama, S., 142  
 Salit, E. P., 151, 258  
 Salter, W. T., 69, 79, 317  
 Saltzman, A. H., 79, 240  
 Saltzstein, H. C., 203, 209  
 Salzberger, M. B., 656  
 Samartino, G. T., 23  
 Sammons, H. G., 217  
 Samuels, L. T., 247  
 San Clemente, C. L., 638  
 Sanchez, E. G., 641  
 Sanchez-Palomera, E., 174, 209  
 Sanders, F. K., 462, 557  
 Sanders, J., 283, 386  
 Sandground, J. H., 641  
 Sandow, A., 121, 124, 125  
 Sandmeyer, J. A., 287  
 Sands, I. J., 518  
 Sandweiss, D. J., 203, 206, 208, 209  
 Sanford, M. C., 174  
 Sanger, F., 85, 110  
 Sangster, W., 201, 654  
 Sansome, E. R., 613  
 Santenose, D., 177  
 Sanz, C., 617  
 Saphir, W., 423  
 Sapirstein, L. A., 285, 287  
 Sappington, T. S., 79  
 Sara, J. G., 91, 92  
 Sarett, L. H., 78  
 Sargent, F., 366, 367, 583  
 Sarnoff, S. J., 172  
 Sarrouy, J., 657  
 Sartori, A., 445  
 Sastry, P. B., 445  
 Sass, J. E., 615  
 Sauer, K., 564  
 Saunders, J. B. de C. M., 108, 109  
 Savage, B. M., 153, 155  
 Savit, J., 305  
 Sawin, P. B., 41, 108  
 Sawyer, C. H., 58, 181, 459  
 Sayers, G., 77, 78, 84  
 Sayers, M. A., 77, 78, 84  
 Scarff, R. W., 232  
 Scatchard, G., 345, 346, 348, 349  
 Schachter, R. J., 285  
 Schade, A. J., 345  
 Schaefer, H., 486  
 Schaeffer, E. W., 608  
 Schafer, P. W., 285, 289  
 Schafer, *see also* Sharpey-Schafer, E. P.  
 Schaffer, N., 390  
 Schaffer, N. K., 76  
 Schallek, W., 478  
 Scharrer, E., 164, 179  
 Scharrer, B., 179  
 Schartau, O., 25  
 Schattenberg, H., 5  
 Schattner, F., 358  
 Scheer, B. T., 26, 28  
 Schegloff, B., 517  
 Scheiner, H., 172  
 Scheinfinkel, N., 132, 494  
 Scheinker, I. M., 316  
 Schelling, V., 285  
 Scheminsky, F., 473  
 Schemm, F. R., 310  
 Schenck, J. R., 7  
 Scherf, D., 304, 310, 445  
 Scherlis, S., 313  
 Schiff, L., 207  
 Schiller, J., 644  
 Schiller, S., 79, 80  
 Schilling, I., 659  
 Schlamowitz, I., 150, 311  
 Schlegel, J. U., 53  
 Schlesinger, B., 172  
 Schloemer, H., 654, 655  
 Schmid, T., 267  
 Schmidt, C. F., 261, 263, 309, 358, 361, 371, 440, 448  
 Schmidt, E. C. H., Jr., 88, 383  
 Schmidt, G., 315, 372  
 Schmidt, L. H., 612  
 Schmidt, R. E., 159  
 Schmidt-Nielsen, K., 19, 131, 591  
 Schmith, K., 72, 74  
 Schmitt, D. H., 494  
 Schmitt, F. O., 20, 113, 126, 127  
 Schneider, H. A., 621  
 Schneider, M., 261  
 Schnell, J., 142  
 Schnetzler, E. E., 73  
 Schoepfle, G. M., 121, 124, 461, 471, 474  
 Schofer, W., 659  
 Scholander, P. F., 357, 358, 359, 368  
 Scholes, J. C., 621  
 Scholten, J. M., 545  
 Scholz, D. E., 422  
 Scholz, C. R., 654  
 Schonerstedt, B., 274  
 Schoonover, I. C., 110  
 Schopfle, G. A., 495  
 Schorr, E., 214  
 Schott, R. G., 54  
 Schotte, O. E., 38  
 Schou, P., 226, 394, 588  
 Schour, I., 106  
 Schrader, F., 20  
 Schrader, S. J., *see also* Hughes-Schrader, S. J.  
 Schraffenberger, E., 111  
 Schram, W. R., 105  
 Schreiber, S., 57  
 Schroeder, H. A., 233  
 Schueler, F., 305, 318  
 Schufflen, A. C., 597  
 Schultz, J. H., 422  
 Schulz, M. D., 173, 209  
 Schumacher, G. A., 563  
 Schütze, H., 639  
 Schwab, R. S., 515  
 Schwachman, H., 107  
 Schwartz, I., 393, 422  
 Schwartz, R. P., 139  
 Schwartzman, G., 13  
 Schweitzer, A. J., 82  
 Schweitzer, A., 136, 388, 396  
 Schwerma, H., 446, 447  
 Schwimmer, D., 74  
 Schwind, F. J., 272  
 Sciclounoff, F., 653  
 Scott, C. C., 91, 283, 402, 651  
 Scott, D. B. M., 86  
 Scott, G. T., 593  
 Scott, J., 214

- Scott, J. C., 271, 317  
 Scott, M. G., 155, 156  
 Scott, W. J., 374  
 Scott, W. J. M., 197  
 Scow, R. O., 107, 108  
 Scovel, F. G., 657  
 Scudi, J. V., 641  
 Sealock, R. R., 234  
 Searborough, H., 624  
 Sebrell, W. H., 74, 142, 316  
 Secunda, L., 519  
 Sedra, K. B., 303, 304  
 Seed, L., 12  
 Seegal, B., 83  
 Seegal, B. C., 245  
 Seegar Jones, G. E., 61  
 Seegers, W. H., 336  
 Segaloff, A., 82, 109, 644  
 Segers, M., 310, 315  
 Seguin, C. A., 518  
 Seiden, G., 91  
 Seidlin, S. M., 73  
 Seidman, L. R., 640  
 Seifter, J., 63  
 Seifter, S., 638  
 Seignourie, 273  
 Seitz, C. P., 371  
 Sekerak, B., 247  
 Seligman, A. M., 247, 248, 270, 278, 280, 282, 285, 309, 346, 586  
 Selkurt, E. E., 231, 232, 262, 266, 267, 269, 270, 280, 281  
 Selle, R. M., 53  
 Sellman, S., 33  
 Selye, H., 81, 83, 84, 183, 244, 644  
 Selzer, A., 313  
 Sendroy, J., Jr., 361  
 Sendroy, M. A., 103  
 Sensenbach, W., 311, 314  
 Servelle, M., 197  
 Sesler, C. L., 612  
 Severens, J. M., 621  
 Sevestre, K., 586  
 Sexton, D. L., 74  
 Sexton, W. A., 13, 661  
 Seymour, H. I., 20  
 Shaffer, B., 657  
 Shaffer, C. B., 642  
 Shakhnovskaya, S. B., 584  
 Shackle, A. B., 433  
 Shanes, A. M., 484, 594  
 Shank, R. E., 141  
 Shapiro, A. L., 656  
 Shapiro, B., 642  
 Shapiro, H., 27  
 Sharp, D. G., 636  
 Sharpey-Schafer, E. P., 169, 275  
 Shay, H., 201, 204, 206, 393, 641  
 Shaw, G., 664  
 Shay, J. R., 615  
 Shea, P., 393  
 Shear, M. J., 12  
 Sheehan, D., 164, 173  
 Shelden, F. F., 439  
 Sheline, G. E., 211  
 Shelley, W. B., 313, 392, 418, 419, 420  
 Shen, S.-C., 127, 621  
 Shenkin, H. A., 286  
 Shepherd, M., 359  
 Sheppard, R., 86, 89  
 Sheps, J. G., 531  
 Sheridan, E., 131, 590  
 Sherrington, C. S., 542  
 Sherrod, T. R., 654, 655  
 Shields, J. B., 420, 422  
 Shils, M. E., 110  
 Shimotori, N., 112  
 Shipley, E. G., 91  
 Shipley, R. A., 80, 384, 388  
 Shock, N. W., 142, 228, 257, 363  
 Shonyo, E. S., 262  
 Shore, E., 287  
 Shore, R., 443  
 Shorr, E., 53, 87, 233  
 Shorr, H. M., 310  
 Shukis, A. J., 77  
 Sichel, F. I. M., 120, 123  
 Sidwell, A. E., 446, 447  
 Siebens, A., 182  
 Siebens, A. A., 500, 535  
 Siegfried, E. C., 436  
 Siegling, J. A., 103  
 Sievers, R. F., 432  
 Sikorow, H., 311  
 Silberberg, M., 109  
 Silberberg, R., 109  
 Silva *see also* Roche e Silva, M.  
 Silveira, A., 535  
 Silverman, D., 519  
 Silverman, J. J., 391  
 Silverstein, F., 289  
 Simard, L. C., 88  
 Simmonds, S., 7  
 Simmonds, W. J., 423  
 Simmons, G. F., 54  
 Simmons, H. T., 171  
 Simmons, V. L., 54  
 Simonds, J. P., 243  
 Simonson, E., 152, 157, 310  
 Simpson, M. E., 55, 58, 75, 77, 78, 103, 107, 108  
 Simpson, W. F., 30  
 Simpson, W. L., 597  
 Singer, M., 332  
 Singer, T. P., 128, 664  
 Singh, I., 303, 304, 595  
 Singh, S. I., 303, 304, 595  
 Singher, H. O., 128  
 Siple, H., 204, 206, 641  
 Sirna, A. A., 519  
 Siskel, J., 440, 489  
 Sittig, O., 530  
 Sjaardema, H., 514  
 Sjoberg, S., 212  
 Sjöstrand, F., 126  
 Sjöstrand, T., 235  
 Skeggs, H. R., 229, 230  
 Skelley, W. C., 54  
 Sklow, J., 644  
 Skoglund, C. R., 166, 461, 469, 474, 486, 494, 566  
 Skouby, A. P., 255  
 Slater, C., 643  
 Slater, D. W., 23  
 Slater, E., 519  
 Slein, M. W., 85  
 Slizynski, B. M., 609  
 Slocum, H. C., 168  
 Sloman, K. G., 361  
 Slome, D., 231, 262  
 Slotta, K. H., 635  
 Smalley, J. E., 158  
 Smalley, M. A., 158  
 Smedal, H. A., 439  
 Smelser, K. G., 142  
 Smetana, H. F., 245  
 Smirk, F. H., 257  
 Smirnova-Zamkova, A. I., 171  
 Smith, B. C., 416  
 Smith, C. A., 358  
 Smith, D. C., 87, 372, 434  
 Smith, D. E., 81  
 Smith, E. L., 309  
 Smith, E. W., 54  
 Smith, F. M., 239  
 Smith, G. C., 72, 74, 109  
 Smith, G. H., 619  
 Smith, G. van S., 61  
 Smith, H. J., Jr., 281  
 Smith, H. P., 336  
 Smith, H. W., 226, 288, 289, 309  
 Smith, I. G., 394, 396  
 Smith, J. R., 263, 318

- Smith, L. E., 281  
 Smith, M. C., 197  
 Smith, M. I., 642, 664, 666  
 Smith, O. W., 61  
 Smith, P. E., 59  
 Smith, P. K., 438, 660  
 Smith, R., 53  
 Smith, R. E., 446, 658  
 Smith, S. E., 110  
 Smith, S. G., 360  
 Smith, W. K., 535  
 Smithwick, R. H., 168, 170, 288  
 Smithy, H. G., 213  
 Smolens, J., 633, 639  
 Smolik, E. A., 168, 314, 443  
 Smyth, H. F., Jr., 642  
 Snape, W. J., 219  
 Snellman, O., 113  
 Snider, R. S., 540, 544, 545, 561  
 Snyder, F. F., 434  
 Snyder, J. C., 659, 660  
 Snyder, R., 659  
 Sobel, A. E., 105, 106  
 Sobin, S. S., 256  
 Soffer, L. J., 82  
 Sola, S. L., 61  
 Sollner, K., 483, 594  
 Somervell, T. H., 209  
 Sommers, S. C., 629  
 Sonn, E. B., 618  
 Sonnet, P., 654, 655  
 Sorensen, S. P. L., 327, 328  
 Sorter, H., 197  
 Soskin, S., 85, 372  
 Souder, W., 110  
 Souidan, Z., 142  
 Southard, F. D., Jr., 202, 287  
 Southworth, J. L., 171  
 Sparrow, A. H., 349  
 Sparrow, R. C., 62  
 Spealman, C. R., 169, 258, 382, 415  
 Spector, H., 420, 421, 422  
 Spiegel, I. J., 564, 565  
 Speight, H. E., 207  
 Sperry, R. W., 539, 547  
 Spiegel, E. A., 261, 595  
 Spiegel, J. P., 572, 574  
 Spiegel-Adolf, M., 126, 595  
 Spiegelman, S., 29, 35, 38, 595  
 Spier, E., 651  
 Spies, T. D., 194  
 Spikes, J. D., 29  
 Spingarn, C., 383  
 Spink, W. W., 630  
 Spitz, E. B., 135  
 Spofford, W. R., 33  
 Sprague, G. F., 615  
 Sprague, J. M., 547  
 Sprague, R. G., 88  
 Squire, J. R., 260  
 Stacey, M., 113  
 Stadie, W. C., 364, 366, 436  
 Stadler, L. J., 606, 617  
 Stafford, W. T., 56  
 Stagnara, P., 173  
 Stahlman, M., 281  
 Stander, H. J., 228  
 Stanley, W. M., 636, 640  
 Stare, F. J., 349  
 Starr, I., 275, 286, 308, 445  
 Starr, M. P., 159, 662  
 Staub, A. M., 653, 655  
 Stauffer, E., 39  
 Staumfjord, J. V., 62  
 Stavratsky, G. W., 177  
 Stead, E. A., Jr., 170, 275, 280, 286, 287, 308, 309, 346, 347, 402, 585, 586  
 Stead, J. K., 393  
 Steadman, F. H., 57  
 Steadman, L. T., 422  
 Stearns, S., 318  
 Stedman, E., 21  
 Steele, J. M., 233  
 Steggerda, F. R., 218, 654, 655  
 Stein, I., 257, 310  
 Stein, J., 204  
 Stein, K. E., 84, 104  
 Stein, L., 316, 385  
 Steinbach, H. B., 20, 24, 29, 131, 591, 594, 595  
 Steinberg, A. G., 624  
 Steiner, M., 639  
 Stephens, W. E., 260  
 Stephenson, C. S., 369  
 Stephenson, M. L., 233  
 Sterling, K., 458, 491  
 Stern, C., 608  
 Stern, K., 24  
 Stern, M. M., 135  
 Sterne, G. D., 71  
 Stetten, D., Jr., 87, 89  
 Stevens, C. D., 235, 362, 520  
 Stevens, M. E. T., 401  
 Stevens, R. J., 207  
 Stewart, H. J., 170, 171, 259, 260, 289  
 Stewart, W. B., 472  
 Stickney, J. C., 214, 430  
 Stock, A., 402, 581, 585, 586  
 Stock, C., 662, 664  
 Stockholm, M., 588  
 Stoerk, A. C., 241  
 Stoerk, H. C., 83, 108, 245  
 Stohlman, E. F., 642  
 Stokes, F. J., 329  
 Stokes, J., Jr., 341, 343, 348, 632, 640  
 Stoker, E., 394  
 Stoll, C., 159  
 Stone, H., 81, 644  
 Stone, L. S., 38  
 Stone, W. E., 439, 515  
 Stoner, H. B., 135, 136, 231, 396  
 Storer, E. H., 166, 173  
 Stormont, R. T., 659  
 Stowell, A., 540, 544, 545, 561  
 Strajman, E., 158  
 Strandskov, H. H., 59  
 Stratton, F., 619  
 Straus, W. L., Jr., 547  
 Strauss, H., 515, 518, 519  
 Street, S. F., 120  
 Streltsov, V. V., 364  
 Stringer, L. D., 582  
 Strong, L. C., 606  
 Strong, L. E., 329, 343, 344, 345, 349, 632, 640  
 Stroud, W. D., 257, 289  
 Strowger, B., 516  
 Strugger, S., 582  
 Strumia, M. M., 6, 329  
 Stryker, W. A., 302  
 Stuart, A. H., 77  
 Stuart, H. C., 62  
 Studitski, A. N., 110  
 Sturdivant, J. H., 359  
 Sturgeon, A. M., 198  
 Sturkie, P. D., 37, 55  
 Sturm, H. Z., 585  
 Sturin, R. E., 319  
 Sturtevant, A. H., 618  
 Sturzinger, H., 90  
 Sue, P., 71  
 Sugar, O., 432, 518  
 Sugarman, M. H., 206, 209  
 Suhrie, V., 230  
 Sulkin, S. E., 661  
 Sullivan, C. M., 30  
 Sullivan, J. D., 561



Sullivan, N. P., 37  
 Sulman, F., 58, 644  
 Sulzer, R., 311  
 Sunderman, F. W., 5  
 Sure, B., 236  
 Sütö-Nagy, G. J., 584  
 Swain, A. P., 11  
 Swann, H. G., 444  
 Swanson, P., 630, 636  
 Sweeney, A. R., Jr., 438  
 Sweeney, H. M., 439  
 Sweet, W. H., 261, 518  
 Swenson, O., 333  
 Swift, R. W., 425  
 Swift, W. E., 12  
 Swingle, S. M., 26  
 Swingle, W. W., 142, 279  
 Swinyard, E. A., 517, 520  
 Swenson, O., 332  
 Syrkin, P. E., 364  
 Szakall, A., 149, 151  
 Szego, C. M., 335  
 Szent-Györgyi, A., 128  
 Szepsenwol, J., 301  
 Szobel, D. A., 660

## T

Tabor, H., 284, 285, 422  
 Tadros, W., 661  
 Tagnon, H. J., 333, 393, 616  
 Tahmisiyan, T. N., 371, 432  
 Takacs, W. S., 660  
 Takeuchi, T., 460, 482, 485, 488  
 Talaat, M., 374  
 Talbot, N. B., 77, 79, 240, 387  
 Talbot, S. A., 500, 525, 532, 533  
 Talesnik, J., 314  
 Tamini, E., 35, 36  
 Tandowsky, R. M., 317  
 Tang, P. S., 615, 616  
 Tower, S., 562  
 Tasaki, I., 460, 479, 482, 485, 487, 488  
 Tatum, E. L., 610, 614  
 Taubenhaus, M., 516  
 Taurog, A., 71  
 Taussig, H., 303  
 Taylor, A. R., 636  
 Taylor, A. N., 170, 264, 279, 287, 288, 547, 565  
 Taylor, C. B., 358  
 Taylor, C. L., 419

Taylor, F. H. L., 333, 350, 393, 616  
 Taylor, G. M., 159  
 Taylor, H., 152  
 Taylor, H. L., 313, 329, 343, 344, 345, 435  
 Taylor, H. M., 173  
 Taylor, M. J., 623  
 Taylor, R. G. O., 237, 395  
 Telford, E. D., 171  
 Telford, H. S., 584  
 Telford, I. R., 62  
 Tellman, R. C., 77  
 Tennent, D. M., 389, 422  
 Tennings, C. G., 632, 640  
 Teorell, T., 483, 595, 637, 638  
 Tepperman, J., 365  
 Thaning, T., 199  
 Thatcher, J. S., 79  
 Theander, G., 58  
 Therman, P. O., 494  
 Thoma, K. H., 1, 2  
 Thomas, C. B., 235, 289, 309  
 Thomas, G., 217  
 Thomas, I., 106  
 Thomas, I. A., 14, 661  
 Thomas, J., 315  
 Thomas, J. E., 202, 211  
 Thomas, J. M., 651  
 Thomas, K. J., 310  
 Thomas, O. L., 73  
 Thomas, T. B., 90  
 Thompson, G. N., 520  
 Thompson, J. M., 500, 525, 532  
 Thompson, K. W., 634  
 Thompson, M. B., 547  
 Thompson, R. H. S., 662  
 Thomsen, P., 134  
 Thomson, J. D., 140  
 Thomson, M. R., 641  
 Thomson, *see also* Warneford-Thomson, H. F.  
 Thorell, B., 123  
 Thorn, G. W., 246, 349, 350, 434  
 Thornton, T. F., 166, 173, 446  
 Tierney, N. A., 659  
 Tietz, E. B., 520  
 Tilden, E. B., 195  
 Tilden, I. L., 620  
 Tipson, R. S., 90  
 Tipton, I. H., 71  
 Tipton, S. R., 71  
 Tirelli, M., 36  
 Tiselius, A., 25, 26

Tislowitz, R., 90  
 Titeca, J., 461, 462  
 Tkipuridze, L., 477, 500  
 Tobias, C. A., 366, 435, 438  
 Tobias, C. R., 370  
 Tobias, J. M., 305  
 Todd, A. R., 129  
 Todd, W. R., 107  
 Toennies, G., 8, 11  
 Tolmach, D. M., 310  
 Tolnick, A., 563  
 Toman, J. E. P., 517, 520  
 Tomarelli, R. M., 63  
 Tompkins, P., 52  
 Toomey, J. A., 640, 660, 661  
 Topley, W. W. C., 633  
 Torda, C., 129, 135, 136  
 Toro, J., 132  
 Torregrosa, M. V., 637  
 Tosic, J., 54  
 Tosseland, N. E., 209  
 Touvinen, P. I., 173  
 Tower, S. S., 525, 535, 560  
 Townsley, W., 103  
 Traver, C. A., 442  
 Treffers, H. P., 534, 639  
 Trent, J. C., 173  
 Treves, G. R., 77  
 Trigg, C. H., 366, 372  
 Trim, A. R., 586  
 Trimble, I. R., 174  
 Tripp, E., 170, 287, 288  
 Troesch-Elam, E., 651, 652  
 Truelove, L. H., 399  
 Truex, R. C., 167  
 Truffert, L., 435  
 Trump, R., 196, 443  
 Tucker, H. F., 8  
 Tullar, P. E., 517  
 Tunturi, A. R., 525, 534, 535  
 Tupikova, N. A., 658, 659  
 Turk, H. M., 157  
 Turkel, M., 121  
 Turner, C. W., 69, 108, 584  
 Turner, F. C., 12, 661  
 Turner, R. B., 78  
 Turpeinen, K., 58  
 Turrell, E. S., 373, 418, 422, 438, 439  
 Tuttle, A. D., 369  
 Tuttle, W., 151  
 Tuttle, W. W., 258, 386  
 Tweedy, W. M., 74  
 Twitty, V. C., 40, 290

Tyler, A., 19, 26, 28, 79  
 Tyler, F. H., 246, 349  
 Tyson, M. D., 274

## U

Ulett, G., 510, 514, 518  
 Ulmer, N. Z., 388, 396  
 Underwood, N., 368  
 Ungar, G., 84  
 Ungerleider, H. E., 289  
 Urbach, E., 318  
 Ury, B., 178  
 Ussing, H. H., 589  
 Uvnas, B., 200, 202, 203

## V

Valerio, M., 586  
 Valette, G., 216  
 Van Amberg, R. J., 157  
 Vance, G. A., 316  
 Vanco, L., 584  
 Vandel, A., 21, 61  
 Van Damme, J., 442  
 Vanderbelt, J. M., 336  
 Van Der Horst, C. J., 60  
 Vanderlaan, W. P., 72  
 Van Der Noot, G., 54  
 van der Scheer, J., 638  
 Van Dongen, K., 306  
 Van Dyke, H. B., 658, 659  
 Van Goor, H., 364  
 Van Harreveld, A., 140,  
 430, 464, 520  
 Van Heerswynghe, J.,  
 315  
 Van Liere, E. J., 198, 214,  
 434  
 Van Middlesworth, L.,  
 440  
 Vannini, E., 56  
 Van Slyke, D. D., 231,  
 232, 262, 280, 360  
 Van Wagenen, G., 52, 59  
 Varangot, J., 61, 583  
 Vasquez-Lopez, E., 179  
 Vasseur, E., 25  
 Vaughan, H. H., 384, 387  
 Venable, J. H., 54  
 Venning, E. H., 79, 80,  
 240, 643  
 Verbecke, R., 440, 464  
 Verdam, H. D., 110  
 Verney, E. B., 399  
 Verniory, A., 235  
 Verzar, F., 132, 403, 591  
 Victor, J., 90, 288  
 Vidal, F., 182

Viets, F. G., Jr., 597  
 Viguie, R., 197  
 Ville, C. A., 608  
 Villee, C. A., 37  
 Vilter, C. F., 316  
 Vinci, V. J., 207  
 Vining, K. K., Jr., 447  
 Vintemberger, P., 31  
 Virchow, R., 327  
 Viisscher, F. E., 229, 393  
 Viisscher, M. B., 217, 218,  
 235, 289, 388, 389, 595,  
 596  
 Viisscher, M. C., 170  
 Vivino, J. J., 630  
 Vlad, L., 179  
 Vogt, M., 33, 35, 73, 74,  
 81, 135, 587  
 Volini, I. F., 641  
 Vollenweider, H., 655  
 Vollmer, E., 433  
 Volynskii, B. G., 588  
 von Benetato, G., 179  
 von Bonin, G., 534, 535,  
 548  
 von Brand, T., 30  
 von Euler, U. S., 235,  
 459  
 von Euw, J., 78  
 von Heuverswyn, J., 235  
 von Medem, F. G., 25  
 von Mural, A., 458, 459,  
 460, 461, 478, 484, 485,  
 489  
 von Oettingen, W. F., 642  
 von Pongracz, F., 174  
 von Schulthess, G., 459  
 Vorzimer, J., 74

## W

Wachstein, M., 9, 243  
 Wachtel, L. W., 110  
 Waddell, M. B. R., 636  
 Waddington, C. H., 37  
 Wade, M., 620  
 Wagley, P. F., 540, 546  
 Wagner, C. E., 290, 437,  
 439  
 Wagner-Jauregg, T., 460  
 Wain, R. L., 656  
 Wajda, I., 314, 651, 652  
 Wake, N. L., 111  
 Wakerlin, G. E., 235  
 Wakim, K. G., 175, 307  
 Waksman, S. A., 661  
 Wald, G., 386  
 Waldo, C. M., 28, 71, 73,  
 386

Walker, A. E., 517, 518,  
 554, 561, 566  
 Walker, J., 660  
 Walker, J. C., 622  
 Walker, L., 173  
 Walker, S. M., 121, 124,  
 168, 314, 443  
 Walker, W. H., 310  
 Wallace, L., 310  
 Wallace, W. M., 590  
 Wallenfels, K., 27  
 Wallis, D., 200, 596  
 Wallis, E. S., 78  
 Walls, E. W., 167, 303  
 Walsh, E. G., 443  
 Walshe, F. M. R., 537,  
 553, 557, 563  
 Walter, A. W., 634  
 Walter, W. G., 508, 511,  
 512, 520, 521  
 Walthert, F., 653, 654,  
 655  
 Walton, A., 54  
 Walzl, E. M., 525, 534,  
 535  
 Wang, C. C., 244  
 Wang, G. H., 525, 526,  
 527  
 Wang, S. C., 284  
 Wang, Y. L., 111  
 Wangenstein, O. H., 174,  
 209  
 Wanke, R., 564, 565  
 Waples, E. C., 235, 289,  
 309  
 Wapner, S., 436  
 Warburg, E., 256  
 Ward, A. A., Jr., 474, 535,  
 537, 539, 540  
 Ward, L. S., 311  
 Ward, M. C., 53  
 Warembourg, H., 654  
 Warkany, J., 111  
 Warneford-Thomson, H.  
 F., 168  
 Warner, E. D., 336  
 Warner, E. O., 156  
 Warnock, G. M., 111  
 Warrany, J., 62  
 Warren, C. O., 74  
 Warren, F. L., 642  
 Warren, G. H., 290  
 Warren, H. D., 284  
 Warren, J. V., 170, 275,  
 280, 286, 287, 308, 309,  
 347, 402, 585, 586  
 Warren, S., 51  
 Warren, S. L., 286, 422

- Warshaver, E. R., 634, 636  
 Wartiovaara, V., 582, 583, 593  
 Wasibren, B. A., 90, 92  
 Wasserman, P., 178  
 Wassermann, F., 106  
 Wassermann, S., 172  
 Waterlow, J. C., 386, 392  
 Waters, E. G., 166  
 Waters, L. L., 662, 664  
 Watkins, A. L., 139  
 Watkinson, J. M., 14, 661  
 Watson, B. P., 59  
 Watson, C. W., 539  
 Watson, E. M., 74  
 Watson, J. S., 243  
 Watts, J. W., 531  
 Waugh, J. M., 88, 209  
 Way, S., 203  
 Wayne, E. J., 314  
 Weare, J. H., 329  
 Weatherby, J. H., 155, 587  
 Webb, J. P., 432, 520  
 Webb, R. L., 261  
 Weber, C. J., 641  
 Weber, H. H., 127  
 Webster, J. E., 439, 515  
 Webster, L. T., 621  
 Wechsler, I. S., 182, 515  
 Wedd, A. M., 167, 278, 304, 306, 307  
 Weddell, G., 138, 553, 554, 555, 556, 557, 560, 563, 564  
 Weed, R., 37  
 Weeks, D. M., 191  
 Weeks, W. F., 272  
 Weens, H. S., 308  
 Weertzler, D., 592  
 Wehrmacher, W. H., 140, 141  
 Weil, C. S., 642  
 Weil, E., 105  
 Weil, H., 274  
 Weil, P. G., 84  
 Weiner, J. S., 239, 391, 396, 424  
 Weinglass, A. R., 92  
 Weinhouse, S., 234  
 Weinmann, J. P., 106, 110, 112  
 Weir, E. G., 596  
 Weir, J. F., 210  
 Weisiger, J. R., 444  
 Weiss, P., 1, 2, 32, 140  
 Weiss, R. A., 152, 155, 157, 159  
 Weissberger, L. H., 86  
 Weld, C. B., 596  
 Weller, J. M., 395, 401  
 Wells, H. S., 424  
 Wells, J. A., 654, 655  
 Wells, L. J., 56, 395  
 Wells, S. L., 77  
 Welser, L., 156  
 Welsh, I. H., 135  
 Welsh, J. H., 478  
 Welti, 400  
 Wendel, W. B., 365  
 Wendkos, M. H., 314  
 Wennesland, R., 358  
 Werle, J. M., 276, 278, 280, 281  
 Wernstedt, A., 593  
 Wernstedt, C., 142  
 Wersall, R., 483, 595  
 Wertheimer, E., 90, 316, 385  
 Werthessen, N. T., 22, 54, 57  
 Wescoe, W. C., 69  
 Wessinger, G. D., 110  
 Wesson, L. G., 112  
 West, H., 157  
 Weston, R. E., 446  
 Wexler, J., 260, 305, 319  
 Weygandt, J. L., 586  
 Whaley, W. G., 617  
 Wheeler, A. H., 660  
 Wheeler, C., 641  
 Wheeler, N. C., 317  
 Whitaker, D. M., 31, 290  
 Whitcomb, B. B., 273, 518  
 White, A., 83, 633  
 White, J. C., 167, 565, 566  
 White, P., 61  
 White, P. D., 168, 257, 289, 310  
 White, P. R., 32  
 White, W. F., 306, 317  
 Whitehorn, W. V., 311, 366, 437, 439  
 Whiteley, A. H., 280, 368, 437  
 Whiting, A. R., 42, 616  
 Whiting, P. W., 40  
 Whittenberger, J. L., 260, 305, 319, 447  
 Whitteridge, D., 443, 462, 557, 558, 564  
 Wicklund, E., 27  
 Widdowson, E. M., 664  
 Wiener, A. S., 618, 619, 620, 633, 637  
 Wiersma, C. A. G., 464, 501, 520  
 Wiesner, B. P., 52  
 Wieth-Pedersen, G., 150, 422  
 Wiggers, C. J., 257, 259, 264, 267, 275, 276, 277, 278, 279, 280, 281, 282, 283, 307, 318  
 Wiggers, H. C., 271, 279, 280, 285  
 Wigglesworth, V. B., 391  
 Wilbrandt, W., 581, 592, 594  
 Wilburne, M., 256  
 Wilde, W. S., 131, 591  
 Wilhelmi, A. E., 281, 315  
 Wilkins, L., 77  
 Wilkinson, J., 202  
 Wiley, M. M., 61  
 Will, O. A., 519  
 William, *see also* Allen-William, G. M.  
 Williams, A. G., 55  
 Williams, C. M., 35  
 Williams, D., 509, 515, 517, 518  
 Williams, H. H., 62, 75  
 Williams, H. L., 653, 654, 655  
 Williams, J. W., 339  
 Williams, O. L., 439  
 Williams, P. C., 55  
 Williams, R. H., 74, 92, 237, 587  
 Williams, W. L., 12, 62, 662  
 Willis, G. M., 594  
 Wilmoth, J. H., 30  
 Wilschi, E., 56  
 Wilson, A., 135, 136  
 Wilson, D. A., 173, 365  
 Wilson, G. D., 159  
 Wilson, G. S., 633  
 Wilson, H., 79  
 Wilson, J. G., 57  
 Wilson, J. W., 373, 444  
 Wilson, M., 155, 156  
 Wilson, W. C., 545  
 Wimsatt, W. A., 28  
 Winbury, M., 88  
 Winder, C. V., 652, 654, 655  
 Windle, W. F., 430, 540  
 Winkler, A. W., 72, 286, 382, 386, 387, 402, 587  
 Winsor, T., 273, 274, 303, 310, 389, 390  
 Winter, H. A., 78, 86, 89

Winternitz, J., 84, 401  
 Winternitz, M. C., 283,  
 274, 285, 584  
 Winterstein, H., 446  
 Wintersteiner, O., 78  
 Wintrobe, M. M., 316  
 Wirz, H., 385  
 Wise, C., 275, 310  
 Wise, G. H., 62  
 Wise, W., 317  
 Wislocki, G. B., 20, 60  
 Witebsky, E., 619, 630,  
 636  
 Witkin, E. M., 611  
 Witschi, E., 54, 55, 56  
 Wittler, R., 635  
 Wixom, R. L., 79, 240  
 Wöhlisch, E., 121  
 Wolbach, S. B., 111  
 Wolf, A. V., 237, 384, 422  
 Wolfe, J. K., 79  
 Wolferth, C. C., 312  
 Wolff, E., 358  
 Wolff, H. G., 129, 135,  
 136, 553, 558, 561, 562,  
 563  
 Wolff L., 302, 311  
 Wollack, A. C., 447  
 Wollaeger, E. E., 210  
 Wolman, W., 446, 447  
 Woltz, J. H. E., 61  
 Wood, D. J., 310  
 Wood, D. R., 133  
 Wood, E. H., 319, 420  
 Wood, F. C., 312  
 Wood, H. G., 315  
 Wood, P. E., 359  
 Woodger, J. H., 1  
 Woodruff, B. G., 163  
 Woodruff, L. M., 246, 346,  
 347, 348, 349  
 Woodson, F. C., 518  
 Woodson, F. G., 273  
 Woodward, F. R., 181  
 Wooley, D. W., 112  
 Woollard, H. H., 554, 555,  
 556, 557

Wooley, C. N., 165, 182,  
 500, 525, 526, 527, 528,  
 529, 530, 531, 532, 534,  
 535, 539, 541, 545  
 Worley, L. G., 23  
 Wortis, S. B., 518  
 Woywood, H., 58  
 Wrammer, T., 562  
 Wright, A. M., 207, 246  
 Wright, E. C., *see also*  
 Barton-Wright, E. C.  
 Wright, G. W., 259  
 Wright, H. E., 643  
 Wright, L. D., 229, 230  
 Wright, L. T., Jr., 419  
 Wright, P. A., 23  
 Wright, S., 607, 608, 613,  
 618  
 Wu, P. P. T., 209,  
 Wulff, V. J., 446  
 Wyburn, G. M., 28  
 Wyburn, G. W., 55  
 Wycis, H. T., 261  
 Wyman, J., Jr., 365  
 Wynn, W., 154, 205, 401  
 Wyss, A., 458  
 Wyss, F., 458, 459  
 Wyss, O., 656  
 Wyss, O. A. M., 177

## Y

Yacorzynski, G. K., 548,  
 561  
 Yang, W., 215  
 Yardumian, K. V., 91  
 Yeager, C. L., 518  
 Yeakel, E. H., 182, 235  
 Yeates, N. T. M., 423  
 Yegian, D., 582  
 Yensen, M. M., 639  
 Yeomans, A., 659  
 Yonkman, F. F., 651, 654,  
 655  
 York, J. S., 318  
 Youmans, G. P., 630

Youmans, W. B., 168,  
 178, 196, 213, 314  
 Young, F. G., 75, 76  
 Young, I. M., 430  
 Young, I. Z., 141  
 Young, J. W., 655  
 Young, J. Z., 497, 557  
 Young, L., 664  
 Young, W. F., 381  
 Yuile, C. L., 287  
 Yuniev, G. S., 306

## Z

Zachowski, J., 194  
 Zahl, P. A., 662  
 Zak, E. R., 389  
 Zamecnik, P. C., 19, 233,  
 284  
 Zamenhof, S., 611  
 Zamkova, *see also* Smir-  
 nova-Zamkova, A. I.  
 Zarafonetis, C. J. D., 659,  
 660  
 Zavadovsky, B. M., 51  
 Zeckwer, I. T., 57, 76, 243,  
 Zelle, M. R., 622  
 Zemp, J., 485, 489  
 Zerah, K., 593  
 Zeuthen, E., 19, 28, 30  
 Ziegler, L. H., 182  
 Ziff, M., 128  
 Zimmerman, S. L., 317  
 Zintel, H. A., 61  
 Zohman, B. L., 171  
 Zondek, B., 58, 108, 642,  
 644  
 Zotterman, Y., 166, 167,  
 177, 272, 440, 553  
 Zucker, L. M., 199, 243  
 Zucker, T. F., 199, 241,  
 243  
 Zuger, B., 639  
 Zukerman, M., 318  
 Zumbühl, E., 593  
 Zweifach, B. W., 233, 265,  
 281, 282, 285, 287  
 Zwilling, E., 33, 41

## SUBJECT INDEX

### A

Absorption, intestinal, *see* Intestine

Acetic acid

cardiac metabolism and, 315

Acetylcholine

anaphylactic shock and, 176

in cardiac muscle, 167, 176

central nervous activity and, 508

chemoreceptor stimulation by, 442

cholinesterase concentration and, 134

concentration gradient of, 587

in degenerating nerves, 459

electrocardiogram and, 304

electromotive force and, 134

ephedrine and, 172

heart acceleration and, 168, 315

heart contraction and, 306

intestinal motility and, 215

in muscle, 135

muscle contraction and, 129, 494

myasthenia gravis and, 135-36

nerve conduction and, 458, 489-93

neuromuscular transmission and, 132-35

precursor of in heart, 167, 176

production of epinephrine-like compound by, 314

release of, 176

respiratory control and, 440

in small intestine, 214, 215<sup>1</sup>

synaptic transmission and, 465-66, 468, 493

synaptic transmission

epinephrine potentiation of, 176

synthesis of

adenosinetriphosphate and, 134

citric acid and, 134

in nerve, 459

ventricular arrhythmias and, 305

water diuresis and, 399

Acids, *see* particular acid

Activity, muscular, *see* Muscular exercise

Adenosinetriphosphate

acetylcholine synthesis and, 134

coronary blood flow and, 318

growth and, 75

heart contraction and, 306

ischemic shock and, 129

in muscle, 127-29

muscle contraction and, 120, 128-29

myosin and, 128

spermatozoal glycolysis and, 21, 54

structure of, 129

water diuresis and, 396

Adrenal cortex, 56, 77-92, 236, 239-40, 244, 385, 434

adrenocorticotrophic hormone and, 77

alloxan and, 90

alloxan diabetes and, 91, 92

antibody formation and, 83

burn shock and, 84

capillary permeability and, 584

cold resistance and, 84

diabetes and, 89

diet and, 81

enzymes and, 81

epinephrine and, 81

glycogen synthesis and, 85, 87

hexokinase and, 85

hypertension and, 290

infection and, 84

injury and, 84

insufficiency of

hypertension and, 236

lymphocytopenia and, 83

melanin metabolism and, 82

muscular fatigue and, 82

ovariectomy and, 81-82

renal damage and, 244

resistance to anoxia and, 84, 434

sex reversal and, 56

sodium retention and, 79, 239, 240

steroids of, 78-81

assay for, 80-81

chemistry, 78-80

excretion in man, 80

*see also* individual steroids

thiurea and, 74

water diuresis and, 385

work output and, 154

*see also* Desoxycorticosterone, Corticosterone

Adrenal gland

experimental diabetes and, 92

hemorrhage and, 84

hormone of

adrenocorticotrophic hormone and, 108

insufficiency of

ovarian hormones and, 56

lactation and, 62

muscle electrolytes and, 591

muscular contraction and, 132

ovariectomy and, 81-82

plasma protein and, 82

pregnancy and, 59

water intoxication and, 384, 385

Adrenal medulla

water diuresis and, 385, 399

- Adrenalin, *see* Epinephrine
- Adrenergic tissues  
  differentiation of, 165
- Age  
  anoxia and, 429  
  arterial pressure and, 257  
  thiourea toxicity and, 73
- Agglutinins, 337-39, 639  
  destruction of by pepsin, 339
- Aging  
  phosphate compounds and, 75  
  of skeleton, 109  
  sympathetic nervous system and, 183
- Albumin, *see* Proteins, serum
- Alcohol  
  gastric secretion and, 202
- Allergy  
  autonomic nervous system and, 183
- Alloxan  
  action in various species, 91  
  adrenal cortex and, 90  
  in blood, 90  
  cytotoxic action of, 90  
  determination of, 89-90  
  diabetes and, 89-92  
  in fetal blood, 61, 88  
  partial pancreatectomy and, 91  
  protection from, 92  
  related diabetogenic chemicals and, 90  
  renal damage and, 243
- Altitude, *see* Oxygen deficiency
- Amino acids  
  absorption of, 217  
  bone growth and, 110  
  kidney metabolism and, 234  
  renal excretion of, 229-30  
  *see also* specific amino acids
- p*-Aminobenzoic acid  
  Rickettsial infections and, 659-60
- Ammonia  
  excretion of, 237  
  muscle cell permeability and, 131
- Amphetamine  
  anorexia nervosa and, 197  
  prefrontal leucotomy and, 182
- Amylase  
  in blood  
    pancreatitis and, 212
- Androgens  
  induction in embryos and, 36  
  renal hypertrophy and, 244  
  skeleton and, 108-09  
  *see also* Testosterone
- Anemia  
  albumin administration and, 348  
  cardiac output and, 275
- Anemia, pernicious  
  folic acid therapy and, 194
- Anesthesia  
  bleeding volume and, 279  
  cyclopropane  
    cardiac arrhythmias in, 168  
    hyperglycemia and, 178  
  hypertension and, 287, 290  
  renal blood flow and, 262, 393  
  renal function and, 226  
  shock and, 285  
  vasodilatation in, 169
- Angiotonin  
  formation from gastric juice, 233  
  inactivation of, 233  
  *see also* Hypertension, experimental,  
    and Kidney, pressor substances
- Anorexia  
  intestinal distention and, 191
- Anorexia nervosa  
  amphetamine and, 197  
  hunger contractions in, 197
- Anoxia. *see* Oxygen deficiency
- Antibiotics  
  placental permeability to, 583  
  resistance to, 630
- Antibodies, 340-41, 630-39  
  antibody-antigen reactions, 637-39  
  concentration  
    convalescent plasma and, 342-43  
  distribution in plasma fractions, 340-41, 632  
  electrophoretic patterns of, 632  
  estimation of, 634  
  formation of, 632-34  
    adrenal cortical hormone and, 83  
    dietary protein and, 633  
    lymphocytes and, 633  
  infectious hepatitis and, 343, 632  
  for influenza virus, 630  
  for measles virus, 341-42, 632  
  for mumps virus, 342, 630  
  in plasma, 340-41  
  production *in vitro*, 633  
  purification of, 632  
  resistance of  
    chemical and physical agents and, 631  
  sedimentation constants of, 631  
  specificity of, 630-32  
    immunization and, 631
- Antigens, 37-38, 618-21, 634-36  
  action of, anaphylactic shock and, 176  
  adjuvants and, 634  
  agglutinins and antibodies produced by,  
    in man, 639  
  antibody-antigen reactions, 637-39  
  antigenicity of, 634-36  
  clinical use of, 639  
  in embryos, 37-38

- Antigens (*cont.*)  
 genetics and, 618-21  
 Rh antigen of blood, 618  
 stability of, 636
- Antimony  
 chemotherapeutic effect of, 657  
 derivatives of, in filariasis, 657  
 detoxification of, 640-41, 664  
 excretion and distribution of, 658
- Antispasmodic drugs, 651-53
- Antithyroid substances, 72-74  
 molecular structure and action of, 72  
 promizole and, 72, 74  
 propylthiouracil and, 72  
 thyrotoxicosis and, 74  
 toxicity of, 73-74  
*see also* thiourea, sulfanilamid, thiouracil
- Antihistamine drugs, 653-55  
*see also* specific substances
- Aorta  
 pressure pulses in, 256
- Aqueous humor  
 sulfonamides in, 584
- Arsenic  
 detoxification of, 641, 663
- Arterial pressure  
 in anoxia  
   sympathomimetic drugs and, 434  
   brachial artery occlusion and, 256  
   carotid sinus nerve stimulation and, 169  
 chemoreceptors in abdominal bodies and, 177  
 in childhood, 257-58  
 fainting and, 259  
 hypothalamic stimulation and, 180  
 measurement, 256-58  
 pulmonary, 263  
 shock and, 279  
 splanchnic nerve stimulation and, 235  
 variations in, 257-58  
 vagal afferents and, 177  
 vasomotor phenomena and, 272  
 venous tone and, 169  
*see also* Vasomotor phenomena
- Arterial pulses, 255-56, 258  
 aortic, 255  
 calculation of, 255  
 stroke volume and, 255  
 volume pulse  
   of big toe, 258
- Arteries  
 innervation of, 171
- Arteriosclerosis  
 hypertension and, 288  
 kidney clearance of diodrast and, 228  
 lumbar sympathectomy and, 171  
 renal  
   kidney clearance of urea, 228
- Artificial respiration  
*see* Respiration, artificial
- Asphyxia  
 resuscitation from, 446-47
- Atabrine  
 detoxification, 643  
 heart function and, 317
- Atomic bomb  
 action on pregnancy, 59  
 action on sex glands, 55  
 sperm count and, 55
- Atrial pressure, 275-76  
 intrathoracic pressure and, 276
- Atropine  
 cardiac muscle and, 167, 303, 304  
 digitalis myocardial lesions and, 317  
 gastric motility and, 198  
 intestinal motility and, 215  
 neuromuscular transmission and, 133
- Autonomic nervous system, *see* Nervous system, visceral and specific nerves
- ## B
- Bacteria  
 mutant strains  
   bacteriophages and, 611  
   growth requirements of, 610  
   metabolism of, 610-11  
   resistance to penicillin, 611-12  
   transformation of pneumococcal types, 612-13, 635
- Bacterial toxins  
 malignant tumor therapy with, 12, 13, 15
- BAL (British anti-Lewisite), 662-64  
 in arsenic poisoning, 663  
 clinical use of, 664  
 in mercury poisoning, 662  
 renal damage and, 243
- Basal metabolism  
 training and, 152
- Bed rest, 159
- Behavior  
 abnormal  
   spontaneous, 574
- Benadryl  
 antihistamine action of, 654  
 antispasmodic action of, 655  
 gastric secretion and, 201
- Bends, 368, 437-38  
 exercise and, 158  
 incidence of, 438
- Benzilic esters, action of, 652
- Bicarbonate  
 excretion of by kidney, 229
- Bile  
 excretion of cobalt in, 211

- Bioelectric potentials, 477-506**  
 catelectrotonic potentials, 497-99  
 chemical processes in, 484  
 from dorsal root, 498  
 electrolytes and, 482, 594  
 end plate potential, crustacean, 500  
 excitation, propagation and transmission, 485-98  
 gastric secretion and, 596  
 inductance and, 478, 481  
 impedance and, 595  
 inhibition by field currents, 498  
 nature of, 478-85  
 in nerve  
   calcium deficiency and, 484  
   inhibitors and, 484  
   polarization and, 478-83  
   potassium and, 484  
   resting and action, 478-83  
 organic ions and, 482  
 oscillatory phenomena, 484-85  
 in smooth muscle, 501  
 synaptic transmission and, 493-99  
*see also* specific organs
- Bladder, urinary**  
 innervation of, 174-75
- Blood**  
 acid-base balance, 361, 363  
 anoxemia, *see* Oxygen deficiency  
 anoxia and, 430  
 antidiuretic hormone in, 398  
 arterial  
   oxygen saturation of, 445  
   pH of, 362, 366, 373  
 bubble formation in, 290  
 coagulation of  
   albumin injection and, 347  
 dehydration and, 386  
 flow, 258-64  
   arterial pressure and, 266-67  
   body temperature and, 258  
   carbon dioxide and, 440  
   cerebral, 261, 448  
   fainting and, 259  
   heart failure and, 260  
   hemorrhage and, 169  
   hepatic, 264  
   hyperventilation and, 440  
   measurement of, 258-60  
   renal, 170, 261-62, 393  
   in shock, 281-83  
   in skin, 289, 309  
   skin temperature and, 260  
   venous, 273-78  
 gas transport, 357-80  
 gases, analysis of, 357-58  
   fetal, 375  
   *see* specific gases
- Blood (cont.)**  
 groups, 337-39, 636-37  
   isoheamagglutinins and, 337-39  
 leukocytes, *see* Leukocytes  
 oxygen affinity in birds, 374  
 oxygen combining power  
   athletic training and, 374  
 pH and electrocardiogram, 310  
 plasma, *see* Plasma  
 pressure, *see* Arterial pressure  
 proteins, *see* Proteins, plasma and Proteins, serum  
 quantity in tissue  
   measurement of, 260  
 red blood cells, *see* Red blood cells  
 Rh factor in, 618, 637  
 substances in, *see* specific substances  
 of twins, 620  
 types, 337-39, 636, 637  
 venous  
   pH of, 362, 363  
   viscosity, 266  
   in hypothermia, 412  
 total peripheral resistance and, 270
- Blood vessels**  
 of bone marrow  
   nerve fibers to, 164  
 gastrointestinal  
   innervation of, 178  
   vasomotion in, 178  
 innervation of, 169-72, 272  
 venous pain and, 171
- Body weight**  
 arterial pressure and, 257
- Bone**  
 aging of, 109  
   endocrine glands and, 109  
 amino acids and, 110  
 birefringence of, 103  
 calcification of, 106-07, 109  
 dietary manganese and, 110  
 embryonic, 109  
 estrogens, androgens and, 108-09  
 fluorine and, 110  
 fractures, repair of, 104-05  
   demineralization in, 104  
   vitamin A deficiency and, 104  
   vitamin C deficiency and, 104  
 growth  
   denervation of limbs and, 164  
   evocation and, 103-04  
   mechanical structure and, 103  
   muscular forces and, 103  
   thyroid gland and, 107-08  
 mineral substance in, 105  
 muscular exercise and, 103-49  
 nutrition of, 110-13  
 organic matrix of, 105  
 phosphatase and, 106-07



**Bone (cont.)**

- pregnancy, lactation and, 110-11
- sodium and phosphate uptake by, 106
- vitamins and, 111-12

**Botulinus toxin, 635****Brain**

- blood-brain barrier, 584
- brain stem
  - Parkinson's disease and, 540
- circulation of
  - electrical activity and, 513-14
- electrical activity of, 507-24
  - abnormal waves, 510-12
  - alpha rhythms, 509-10
  - analysis of, 520-21
  - arterial carbon dioxide and, 513
  - blood calcium and, 516
  - brain metabolism and, 515
  - circulatory changes and, 513, 516
  - cortical pressure and, 514
  - in criminals, 519
  - drugs and, 517, 520
  - head injury and, 518
  - heredity and, 509
  - hormones and, 516-17
  - hyperinsulinism and, 518
  - lesion and, 509-10
  - normal rhythms, origin of, 509
  - organic psychoses and, 519
  - pain and, 558
  - thalamic nuclei and, 510
  - tumors and, 511, 518
  - water balance and, 516
  - water intoxication and, 385
  - wave form, 508-09
  - see also* Cerebral cortex, electrical activity of
- metabolism of, 261, 435-36

**Bubble formation, 290****C****Caffeine**

- cleavage of eggs and, 28
- diuresis and, 237
- gastric secretions and, 173, 202

**Calcification, of bone and teeth, *see* Bone and Teeth****Calcium**

- of blood
  - anterior pituitary and, 109
  - brain potentials and, 516
  - estrogens and, 109
  - nephrectomy and, 108
  - parathyroid gland, 108
- deficiency
  - bone calcification and, 109
  - gastric lesions and, 199
- deposition in kidney, 242
- of gastric mucus, 204

**Calcium (cont.)**

- intestinal motility and, 215
- parathyroid glands and, 74, 109

**Camphor**

- vagus action on heart and, 167

**Cancer, *see* Tumors****Capillaries**

- fragility of
  - vitamin P and, 586
- permeability of, 172, 584-86
  - adrenal cortical hormones and, 584
  - anoxia and, 431
  - control of, 584
  - to electrolytes, 585
  - to galactose, 585
  - intercellular cement and, 585
  - shock and, 586

**Carbamic esters, *see* Urethane****Carbohydrate**

- dietary
  - cold tolerance and, 416
  - glucose utilization and, 89
  - urea excretion and, 230
  - water diuresis and, 230
- fertilization and, 27
- metabolism of, 85-92
- metabolism of
  - alloxan and, 91
  - naphthylthiourea and, 666
  - potassium and, 132
  - work output and, 154
- see also* Glycogen, Glucose, Lactic acid

**Carbon dioxide**

- arterial
  - altitude and, 369-71
  - hyperventilation and, 362
  - oxygen breathing and, 366
- in blood, 361
  - athletic training and, 374
  - hypothermia and, 411
- blood flow and, 440
- critical tension of, 370
- fainting after exercise and, 152
- oxygen deficiency and, 439
- in resuscitation, 446-47

**Carbon monoxide**

- in blood, altitude and, 372
- chronic poisoning, 435
- combination with hemoglobin, 366
  - oxygen tension and, 366-67
  - ventilation rate and, 366-67
- determination of, 359
- elimination of, 367
- liver accumulation of, 368, 435
- muscle metabolism, 142
- poisoning
  - anoxia and, 435

**Carbonic anhydrase, 363-64**

- activation of, 363

- Carbonic anhydrase (*cont.*)  
 anoxia and, 364  
 brain potentials and, 508  
 distribution of, 364  
 inhibition of, 363-64  
 oxidation and reduction of, 363  
 pH and, 364
- Carcinoma, *see* Tumors
- Cardia, 196-97  
 cardiospasm, treatment of, 197  
 tone changes in, 196
- Cardiac output, 306-10  
 altitude and, 369  
 anemia and, 275  
 ballistocardiograms, 308  
 central venous pressure and, 275  
 congestive heart failure and, 309  
 determination in man, 170, 307, 308  
 high oxygen pressures and, 437  
 hypertension and, 308  
 hyperventilation and, 309  
 intrathoracic pressure and, 277  
 muscular exercise and, 151  
 pressure breathing and, 443-44  
 pulmonary embolism and, 309  
 total peripheral resistance and, 273  
 venous tone  
   sympathetic control of, 169
- Carotenoids, *see* Vitamin A
- Carotid body, *see* Chemoceptors
- Carotid sinus, 272-73  
 cardiac inhibition and, 177  
 diisopropyl fluorophosphate and, 468  
 hypersensitivity of, 273  
 innervation of, 272  
 pulmonary edema and, 172, 272  
 vasomotor reactions, 272
- Cartilage and connective tissue, 112-13
- Cells  
 cytoplasmic constituents  
   carcinogenesis and, 3  
   differentiation of, 3  
   nurse, function of, 22  
   potency of, 2  
   viability of after freezing, 6
- Central nervous system, *see* Nervous system, central; Brain; Cerebral cortex; Cerebellum; medulla oblongata
- Cerebellum, 540-46  
 cerebral connections, 541  
 dual projection in, 541  
 function of, 540-41  
 homologies, 545  
 localized ablations of, 543  
 neocerebellum, 544  
 posture and, 545-46  
 stimulation of, 541-43
- Cerebral cortex  
 acoustic areas of, 533-35
- Cerebral cortex (*cont.*)  
 anoxia, lesions of, 430  
 autonomic disturbances and, 182  
 cingular areas, 535-36  
 circulation in, 261  
 electrical activity of  
   acetylcholine and, 508, 513  
   afferent pathways and, 514  
   alpha rhythms, 509-10  
   anoxia and, 432  
   blood chemistry and, 515  
   carbonic anhydrase and, 508  
   circulatory changes and, 513-14, 516  
   convulsions and, 520  
   cortical stimulation and, 512  
 delta waves, 512  
 epilepsy and, 517-18  
 frontal lobotomy and, 509, 510  
 hypothalamus and, 511  
 electrical activity of  
   hypothalamus and, 511  
   nitrogen inhalation and, 515  
   sleep and, 510, 518  
   spread of depression of, 512-13  
   theta waves, 511  
   *see also* Brain, electrical activity of  
 extrapyramidal pathways, 539-40  
 frontal lobes of  
   connections in, 165  
   functions of, 548  
   pupillary dilatation and, 182  
 hemidecortication, 530  
 homologies, 529  
 hypothalamus and, 536  
 ischemia of  
   peripheral resistance, 284  
 localization in, 526-27, 536-38  
 metabolism of, 435-36  
 motor cortex, 536-39  
   injuries of, 538-39  
   stimulation of, 136-37, 536-38  
 muscle tone and, 538  
 organization of, 526  
 parietal lobe  
   injury, 530  
   of primates, 548  
   pupillary dilatation and, 182  
 pyramidal pathways, 539-40  
 pyramidal tracts  
   spasticity and, 539-40  
 sensory cortex, 525-31  
   lesions of, 529-30  
   sleep and, 181  
 somatic afferent areas, 525-31  
   ablation of, 528  
   duality of, 525, 526, 528  
   somatic functions of, 525-40  
   taste area in, 531  
 thalamus and, 530-31

- Cerebral cortex (*cont.*)  
 visceral motor functions and, 535-36  
 visual functions of, 532-33  
 war injuries and, 529-30
- Cerebrospinal fluid  
 electrolyte equilibrium in, 596  
 nitrogen elimination from, 437  
 pressure of  
   oxygen deficiency and, 431
- Chemoreceptors  
 acetylcholine and, 442  
 respiratory control and, 177, 442  
 vasomotor reactions and, 272
- Chloride  
 absorption from ileum, 218  
 excretion of  
   glycosuria and, 89  
   in skeletal muscle, 129-32  
   *see also* Sodium chloride
- Chloroform  
 renal damage and, 244
- Choline  
 lipotropic action, 8  
 liver cirrhosis and, 9, 211-12  
 in plasma  
   fatty liver and, 211-12
- Cholinesterase  
 acetylcholine concentration and, 134  
 in fatigued skeletal muscle, 132  
 in ileum and duodenum, 214  
 in nerve  
   action potential and, 490-92  
   degeneration and, 459  
   pH and, 134  
 in serum  
   in chronic proteinuria, 245  
   traumatic shock and, 285
- Chorion  
 electrolyte exchanges and, 592
- Chromosomes  
 artifacts in, 609  
 deoxyribonucleic acid and, 610  
 heterochromatic, 609  
 of maize, 615  
 number of in plants, 605  
 phosphatase in, 609
- Circulation, 255-300  
 cerebral, 261, 448  
 muscular exercise and, 150-52  
 peripheral, *see* Peripheral circulation,  
   Arterial pressure, Capillaries, and  
   Vasomotor phenomena  
 portal, 263-64  
 pulmonary, 263  
 renal, *see* Kidney  
*see also* Arterial pressure, Cardiac out-  
 put, Heart, Vasomotor phenomena,  
 etc.
- Circulation time  
 determination of, 260
- Citric acid  
 acetylcholine synthesis and, 134
- Clearance, renal  
*see* Kidney
- Cobra venom, 635
- Cold, *see* Temperature
- Colon  
 bile in, 218  
 gas in, 218  
 hypothalamus and, 181  
 innervation of, 173, 181  
 motility of  
   central nervous system and, 218  
   exsanguination and, 191  
 splastic  
   sympathetic block and, 173  
   tumors of, 219
- Complement, 336, 638-39  
 complement-fixation, 638-39  
 components of, 336, 638  
 in plasma fractions, 336
- Coronary circulation, *see* Heart
- Corpus luteum  
 atomic bomb action and, 55  
 life history of, 51-52  
 maintenance of, 52
- Cortex, cerebral, *see* Cerebral cortex
- Corticosterone  
 partial synthesis of, 78  
 relative potency of, 80
- Coumingine  
 heart contraction and, 317
- Creatinine  
 renal clearance of, 225
- Crotæxin, 635
- Curare  
 bleeding volume and, 279  
 in denervated muscle, 139  
 hypotension and, 171  
 neuromuscular transmission and, 133  
 smooth muscle and, 172
- Cyanide  
 electrocardiogram and, 304
- Cyclopropane  
 ventricular arrhythmias  
   cardiac sympathectomy and, 168
- Cysteine  
 protection from alloxan diabetes, 92
- Cytochrome C  
 anoxia tolerance and, 372  
 cardiac metabolism and, 315  
 liver and kidney metabolism of, 315
- Cytochrome oxidase  
 thiouracil and, 70  
 thyroid hormone and, 71
- Cytoplasm  
 ribose nucleic acid in, 22

## D

- DDT  
 in milk, 584  
 hypothalamic stimulation and, 178
- Decompression, 368  
 pain, exercise and, 438
- Decompression illness, 437-39
- Defense mechanisms, 629-50  
*see also* Antibodies; Antigens; Detoxification
- Dehydration, 386-88  
 albumin administration in, 346-47  
 blood changes in, 386  
 circulatory changes in, 286, 386  
 esophageal motility and, 196  
 mental instability in, 386  
 plasma administration in, 346-47  
 solute diuresis in, 395  
 thiouracil and, 386  
 voluntary, 382  
 water intake and, 383  
 water replacement in, 387
- Desoxycorticosterone  
 alkaline phosphatase and, 81  
 arginase and, 81  
 nephrosclerosis and, 244-45  
 pathological changes and, 83, 244-45  
 salt loss in sweat and, 82  
 toxicity, 83  
 salts and, 83  
 water excretion and, 385
- Desoxyribonucleic acid  
 chromosomes and, 610  
 pneumococcal types and, 612-13
- Detoxification, 640-44  
 of amino and azo compounds, 642-43  
 of antimony, 640-41  
 of arsenic, 641  
 of atabrine, 643  
 of penicillin, 643  
 of phenol, 642  
 of quinine, 643  
 of steroid hormones, 643-44  
 of sulfonamides, 641  
 sulfhydryl compounds and, 662-64  
 of toluene, 642
- Development  
 in *Drosophila*  
 x-rays and, 608  
 of egg, *see* Egg  
 of larvae  
 temperature and, 609  
 of unfertilized egg, 22, 23  
*see also* Egg, unfertilized.
- Development, embryological, 19-50  
 antigens and enzymes in, 37-38  
 chemical agents and, 35-36  
 genes and, 39-42  
*see also* Genes
- Development, embryological (*cont.*)  
 induction in, 33-35  
 larval structures and, 38-39  
 lethal deficiencies and, 41  
 metabolism during, *see* Metabolism  
 microtechniques in, 19-20  
 physical agents and, 36-37  
 pigment patterns in, 40  
 of skeleton, 109  
 of sperm, 20-22  
*see also* Sperm
- Development physiology, *see* Development, embryological
- DFP, *see* Diisopropyl fluorophosphate
- Diabetes, experimental, 89-92  
 adrenal cortical hormone and, 89  
 alloxan, 89-92  
 adrenal gland and, 92  
 brain oxidation and, 91  
 carbohydrate metabolism and, 91  
 dwarfism and, 90  
 fetal islets and, 88  
 hyperlipemia and, 90  
 phosphates and, 90  
 pituitary gland and, 92  
 production of, 90-91  
 protection from, 92  
 stilbesterol and, 92  
 thiamine deficiency and, 91  
 thyroid gland and, 92  
 amellin and, 89  
 anterior pituitary  
 renal damage and, 244  
 chloride excretion and, 89  
 diabetogenic chemicals and, 90  
 diet selection and, 88  
 hepatic lipogenesis and, 87  
 pituitary, 89  
 adrenalectomy and, 92  
 water intake and, 383
- Diabetes insipidus  
 clinical, 400  
 pituitrin-refractory, 237  
 posteriorpituitary and, 399  
 restriction of water intake and, 383  
 sodium intake, urine volume and, 238  
 test for, 399
- Diabetes mellitus  
 pregnancy and, 61  
 renal function and, 237
- Dibutoline  
 gastric motility and, 198
- Dicumarol  
 in milk, 584
- Digestive system, 191-224  
 alimentary tract  
 absorption of penicillin, 194  
 inert material in, 192  
 of infants, 191

- Digestive system (*cont.*)  
 innervation of, 172-74  
 oxygen deficiency and, 431  
*see also* Bile; Colon; Duodenum; Gall bladder; Intestine; Pancreas; Salivary glands; Cardia; and Stomach
- Digitalis  
 cardiac output, venous pressure and, 275  
 central venous pressure and, 275  
 circulatory failure and, 260  
 heart and, 317
- Dihydroxyphenylalanine  
 kidney respiration and, 234
- Diiodotyrosine  
 conversion to tyrosine, 69  
 formation of, 70  
 catalysis by phosphate and acetate, 70
- Diisopropyl fluorophosphate  
 carotid sinus reflex and, 468  
 lack of cholinergic effect *in vivo*, 468  
 nerve action potential and, 458, 490-91
- 2-3 Dimercaptopropanol, *see* BAL
- Diodrast  
 renal clearance of, 225-28, 230  
 in renal arteries and veins, 225
- E**
- Ear  
 inner  
 autonomic innervation of, 183
- Eclampsia  
 renal activity in, 228
- Edema  
 genesis of, 172  
 in heart failure, 309-10  
 prefrontal leucotomy and, 182  
 pulmonary, 171, 263  
 carotid sinus and, 172
- Egg, cleavage of, 28-29  
 caffeine and, 28  
 inhibition of, 28  
 penicillin and, 28  
 viscosity during, 28
- Egg, fertilization of, 25-28, 54-55  
 carbohydrate breakdown after, 27  
 chemical changes in, 27  
 electrostatic patterns and, 27  
 fertilizin and, 25, 26  
 hyaluronidase and, 26  
 physical changes, 27
- Egg, unfertilized  
 birefringence in, 24  
 endomitosis in, 22  
 enzymes of, 23-25  
 irradiation of, 29  
 nucleic acid in, 24
- Egg, unfertilized (*cont.*)  
 physical properties of, 25  
 structure of, 23-25
- Electrocardiography, *see* Heart
- Electroencephalography, *see* Brain, electrical activity of and Cerebral cortex, electrical activity of
- Electrolytes  
 base excretion by kidney, 237  
 capillary permeability and, 585  
 distribution of  
   in kidney, 236  
   permeability to, 589-97  
   in plant cells, 596-97  
   of plasma  
     renal regulation, 237  
   in skeletal muscle, 129-32
- Electromyography  
*see* Muscle, skeletal
- Embryo, *see* Development embryological
- Endocrine glands, metabolic functions of, 69-102  
*see also* specific glands
- Enzymes  
 in embryos, 37-38  
 high oxygen pressures and, 436  
 inhibition of  
   reversal of by BAL, 663  
 respiratory  
   in renal hypertension, 234  
*see also* specific enzymes
- Ephapse  
 synaptic transmission and, 494
- Ephedrine  
 acetylcholine and, 172  
 prefrontal leucotomy and, 182  
 smooth muscle and, 172
- Epicatechol  
 vitamin P activity of, 586
- Epinephrine  
 acetylcholine transmission and, 176  
 adrenal cortex and, 81  
 exercise and, 151  
 in experimental resuscitation, 446  
 heart actions of, 306  
   cocaine and, 315  
 muscular contraction and, 132-33  
 regnal blood flow and, 272  
 secretion of  
   hypothalamic control and, 178  
 sensitization to  
   of renal arterioles, 233  
 staining method for, 165
- Erythrocytes, *see* Red blood cells
- Eserine *see* Physostigmine
- Esophagus  
 dysphagia and, 197  
 idiopathic dilatation of, 197  
 innervation of, 172

- Esophagus (*cont.*)  
 motility of  
   dehydration and, 196
- Estradiol  
 skeletal atrophy and, 108
- Estrogens  
 in blood  
   of women, 52  
 blood changes in birds, 109  
 body temperature and, 52  
 cycle length and, 53  
 detoxification of, 643-44  
 estrus and, 53  
 genital tract modification by, 57  
 growth and, 77  
 induction in embryos and, 36  
 lactation and, 62  
 in plasma protein fraction, 335  
 progesterone and, 57  
 skeletal senescence and, 109  
 skeleton and, 108-09  
 water content of uterus and, 401
- Estrus  
 estrogen and, 53
- Ethyl alcohol  
 diuresis and, 396
- Excretion of various substances *see* specific substances
- Exercise *see* Muscular exercise
- Eye  
 movements of  
   midbrain and, 546  
*see also* Pupil
- F**
- Fainting  
 blood flow and, 259
- Fasting, *see* Inanition
- Fat  
 absorption of, 217  
 in blood  
   proteinuria and, 246  
 dietary  
   cold tolerance and, 416  
   gastric emptying time and, 197  
   water excretion and, 393  
 fetal pancreatic islets and, 88  
 hyperlipemia  
   alloxan diabetes and, 90  
 formation of  
   diabetes and, 89  
   in kidney, 241  
 plasma lipids and renal damage, 247
- Fatty acids  
 absorption of, 193  
 concentration in digestive tract, 193  
 fungicidal action of, 656  
 intestinal motility and, 214-15
- Fatty acids (*cont.*)  
 utilization by intestine, 87  
 volatile  
   metabolism of, 193
- Fibrin  
 films, 331-32  
   clinical applications, 331  
   thrombin and, 331  
 foam, 332-33  
   clinical applications of, 332  
   thrombin and, 332  
 in plasma protein fraction I, 331
- Fibrinogen  
 in plasma protein fraction I, 329, 331
- Fibrinolysin  
 in plasma, 335, 336
- Fluorescein  
 circulation time measurement and, 260
- Fluorine  
 bone changes and, 110  
 dental caries and, 110
- Fluoroacetate, sodium (1080)  
 as rodenticide, 665  
 tissue metabolism, and, 666  
 toxicity of, 665
- Folic acid  
 leucopenia and, 74  
 treatment of sprue and, 194
- Frontal lobes, *see* Cerebral cortex
- Fungicides, 656-57
- G**
- Gall bladder  
 splanchnic nerves and, 172
- Ganglia  
 autonomic  
   aging and lesions of, 183  
   dorsal root  
     vasodilatation and, 176  
 sympathetic *see* Sympathetic nervous system
- Gastrin, 203
- Gastrointestinal tract  
 autodigestion of  
   ulcers and, 206  
 extracts of  
   ulcer therapy, 208  
 fatty acids in, 193  
 mucosa  
   as barrier, 191  
 hypothalamus and, 192
- Gelatin  
 antigenicity of, 635  
 as blood substitute, 635
- Genes  
 antigens and, 618-21  
 changes of  
   in *Neurospora*, 614

Genes (*cont.*)

- chromogenes, 697
  - coat-color in mice and, 623-24
  - cubitus interruptus and, 608
  - cytogenes, 607
  - cytoplasmic factors and, 616-17
  - development and, 39-42
    - chromosome number and, 39
    - sex and, 39
  - embryonic effects of, 40-42
  - growth rate and, 608
  - hemophilia and, 616
  - heterosis and, 617
  - of maize, 615
  - metabolism of mitosis and, 3
  - mutant, linkage of, 607
  - plumage pattern and, 616
  - ribosae nucleoprotein and, 3
  - serum proteins and, 620-21
  - structure of, 606-10
- Genetics, 605-28
- of bacteria, 610-13
  - cytoplasmic influences, 616-17
  - heterosis, 617
  - mutations
    - induction of, 605-06
      - recessive genes and, 607
    - spontaneous, 606
  - of *Neurospora*, 613-15
  - pathology and, 621-23
  - resistance to infection and, 621
  - species crosses, 617-18
  - temperature and, 609
  - tumors and, 623
  - x-ray and, 608, 616
- Glands
- innervation of, 165
- Globulin
- placental, measles and, 342
- Globulins *see* Proteins, serum
- Glucose
- of blood
    - exercise and, 151
    - in hypothermia, 412
    - urea and uric acid excretion and, 228
  - in experimental resuscitation, 446
  - gluconeogenesis by kidney, 247
  - intestinal absorption of, 216, 217
  - oxygen deficiency and, 429
  - tolerance
    - brain stem, 181
  - utilization of
    - anterior pituitary and, 85
    - insulin and, 85
    - by intestine, 87
- Glutathione
- protection from alloxan diabetes, 92
- Glycogen
- fetal pancreatic islets and, 88

Glycogen (*cont.*)

- in kidney, 241
  - in liver, 80, 86, 87
    - oxygen deficiency and, 430
  - in muscle, 86, 87
  - muscle training and, 149
  - synthesis of
    - anterior pituitary and, 85
    - insulin and, 85
    - from lactic acid, 87
- Golgi apparatus
- yolk formation and, 23
- Gonadotropic hormones, 54
- castration and, 58
  - in fetal rats, 56
  - after hypophysectomy, 55
  - ovulation induced by, 54
  - of pituitary gland, 58
  - of pregnancy
    - antihormones to, 60
  - in thiourea-treated rats, 73
- Gonads
- adrenals and, 82
- Growth, 1-18
- aberrations of, 4, 6-10
    - in bone, 4
      - connective tissue hyperplasia, 7
      - labile methyl group deficiency and, 7
  - androgens and, 77
  - of bone, 103
  - growth hormone and, 75-76
  - of kidney, 241
  - organization and, 1-5
  - phosphate compounds and, 75
  - selective inhibition of
    - in tissues, 11
  - substances influencing, 10-15
  - temperature and, 6
  - of tumors, 1
  - of unfertilized egg, 22, 23
  - see also* Development, embryological
- Growth hormone *see* Pituitary, anterior

## H

- Hair
- fungicidal fatty acid in, 657
- Hearing
- cortical projection area for, 533-35
- Heart, 301-26
- action
    - hypothermia and, 412
  - activity
    - as index of fitness, 313
    - potassium phosphate and, 314
  - angina pectoris
  - papaverine and, 318
  - paravertebral block and, 318
  - thiourea and, 316
  - thyroid activity and, 316

Heart (*cont.*)

- arrhythmias
  - anesthetics and, 305
  - digitalis and, 317
  - electrocardiogram and, 311
  - emotion and, 314
  - quinidine and, 317
  - thiamine deficiency and, 315
  - thyroid and, 316
  - ventricular ectopic rhythms, 305
- atrial blood supply, 301
- atrial fibrillation, 305
- atrioventricular block, 305
- atrioventricular node, 303
- atropine and, 167
- ballistocardiograph, 307-08
- catheterization of, 308, 448
- conduction system of, 302-03
- congenital abnormalities of, 303
- contraction of
  - acetylcholine and, 306
  - adenosinetriphosphate and, 306
  - barbiturates and, 307
  - barium chloride and, 306
  - drugs and, 306
  - epinephrine and, 306
- coronary blood flow, 317-19
  - adenosinetriphosphate and, 318
  - anginal pain and, 318
  - pulmonary embolism and, 319
- coronary sclerosis, 302
- coronary vessels
  - innervation of, 167
- coronary occlusion, 302, 318
  - pericoronary neurectomy and, 168
  - ventricular fibrillation and, 305
- development of, 301
- digitalis and, 317
- electrocardiography, 310-13
  - acetylcholine and, 304
  - anoxia and, 431-32, 435
  - arrhythmias and, 311
  - cardiac lesions and, 312
  - clinical abnormalities, 310
  - cyanide and, 304
  - decompression and, 311
  - direct, 311
  - exercise and, 150
  - injury potentials and, 312
  - lumbodorsal sympathectomy and, 168
  - pellagra and, 316
  - P-R interval, 304
  - pulmonary embolism and, 177
  - shock and, 310
  - thiamine deficiency and, 315
  - vectorcardiograph, 311
- embryonic action currents in, 301
- endocarditis, 302

Heart (*cont.*)

- failure, 309-10
  - anoxia and, 429
  - capillary permeability and, 585
  - cardiac output and, 309
  - digitalis and, 317
  - fluid intake and, 310
  - hypothermia and, 411
  - skin circulation and, 309
- innervation of, 166-69
- metabolism of, 315-16
  - acetic acid and, 315
  - cytochrome C and, 315
  - hemorrhagic shock and, 315
  - thyroidectomy and, 316
- methods for study of, 319
- muscle *see* Muscle, cardiac
- myocardial infarction, 302
  - circulation time and, 313
  - strenuous effort and, 318
- myocardium in shock, 307
- nervous control of, 313-15
- pathology
  - beriberi and, 316
  - drugs and, 317
  - potassium deficiency and, 315
- Purkinje system of, 167
- rate
  - acetylcholine and, 168, 315
  - anoxia and, 304
  - exercise and, 151, 155
  - sensory nerve endings in, 303
- sinus node, 304
- sounds
  - atrial, 313
- stroke volume
  - arterial pulses and, 255-56
- valves of, 301-02
  - calcification of, 302
- vascular lesions of, 318
- ventricle, growth of, 301
- ventricular fibrillation, 305-06
  - anoxia and, 305
  - circus movement theory of, 306
  - coronary occlusion and, 305
  - drugs and, 305-06
  - hemorrhagic shock and, 305
  - paroxysmal, 306
  - see also* Cardiac output; Arterial pressure; Venous pressure; Muscle, cardiac; etc.
- Heat, physiological effects of cold and, 409-28
  - see also* Temperature
- Heat loss, *see* Temperature
- Hemoglobin, 357-73, 412
  - active, 360-61
  - altitude and, 369
  - blood pH and, 373



- Hemoglobin (*cont.*)  
 carboxyhemoglobin  
   determination of in blood, 357-58  
 crystallography of, 365  
 diurnal rhythm in concentration in blood, 360  
 "ferrihemoglobinemia," 365  
 in hypothermia, 412  
 in maternal and fetal blood, 365  
 methemoglobin, 365  
 oxyhemoglobin  
   determination of in blood, 358  
   standard values in man, 359-60  
 Hemolysis, *see* Red blood cells, hemolysis  
 Hemophilia, 333, 616  
   gene for, 616  
 Hemorrhage  
   acute circulatory collapse and, 286  
   blood flow and, 169  
   intestinal motility and, 173  
   minute blood vessels and, 282  
   renal blood flow and, 262  
   renal clearance and, 262  
   vasodilatation and, 169  
 Herpes zoster  
   pain of  
     sympathetic block and, 171  
 Hexokinase  
   adrenal cortical extract and, 85  
   anterior pituitary and, 85  
   insulin and, 85  
 Histamine  
   allergy and, 653  
   gastric secretion and, 200-01  
   liberation of  
     muscular effort, 142  
     smooth muscle and, 172  
 Hormones  
   pigment patterns and, 40  
   pregnancy, 60-61  
   ~~sex~~  
     genital tract modification by, 56-57  
   *see also* specific hormones and individual glands  
 Hyaluronidase  
   capillary permeability and, 586  
   fertilization and, 26  
   in semen, 54  
   in uteri of rabbits, 22, 54  
 Hydrochloric acid  
   gastric secretion of, 200  
 Hypertension, *see* Angiotonin and Kidney, pressor substances  
 Hypertensinogen, *see* Kidney, pressor substances  
   *see also* Proteins, serum  
 Hypertension, 287-90, 309  
   arteriosclerosis and, 288  
   cardiac output and, 309  
 Hypertension (*cont.*)  
   nervous factors and, 288  
   neurogenic, 289  
   pituitary gland and, 290  
   renin-angiotonin theory and, 287  
 Hypertension, clinical  
   adrenal insufficiency and, 236  
   arterial pressure in, 289-90  
   diet, kidney load and, 235  
   lumbodorsal sympathectomy and, 168, 170, 288  
   nonrenal humoral mechanism of, 288  
   sodium and, 235  
   unilateral nephrectomy in, 236  
 Hypertension, experimental, 170, 171, 182, 233-36, 287, 288  
   depressor nerve and, 235  
   drugs and, 170, 287  
   emotional types and, 182  
   fish oil extracts in, 236  
   kidney respiration in, 233  
   low sodium diet in, 236  
   neural mechanisms in, 170  
   neurogenesis, 287  
   oxidative enzymes in kidney and, 234  
   renal blood flow and, 170  
   renal function and, 230, 287-88  
   renal pressor system and, 170, 235, 287  
   vascular argyrophil substance and, 171  
 Hyperthermia, *see* Temperature, body  
 Hypophysis, *see* Pituitary gland  
 Hypotension  
   curare and, 171  
 Hypothalamus, 165, 178-82, 192, 398, 511  
   antidiuretic activity of, 398  
   cortical relationships of, 165, 180-81  
   digestive tract and, 192  
   electrical activity of brain and, 511  
   electrical stimulation of, 179  
   emotional activity and, 182  
   epinephrine release and, 178  
   hypothalamic obesity  
     metabolism in, 181  
   lesions of  
     emotion and, 182  
     estrogens and, 179  
     hypokinesia and, 181  
     oxygen deficiency and, 179  
   methods of study, 178  
   neuron degeneration, low atmospheric pressure and, 179  
   obesity and, 181  
   pilomotor center of, 179  
   sleep mechanisms and, 181  
   stimulation of  
     colon and, 181  
     DDT and, 178  
     electrocorticogram and, 181  
     leukocyte response and, 179

- Hypothalamus (*cont.*)  
 stimulation of (*cont.*)  
   ovulation in rabbit and, 181  
   responses of unanesthetized animals  
     to, 179-80  
 Hypothermia, *see* Temperature, body

## I

- Ileum, *see* Intestine, small  
 Inanition  
   gastric lesions and, 199  
   kidney weight in, 243  
 Insulin, 85-89  
   cardiac metabolism and, 315  
   growth and, 76  
   hepatic lipogenesis and, 87  
   oxygen deficiency and, 429, 434  
   phosphorous distribution and, 86  
   resistance to, 87  
   rumplessness and, 36  
   sensitivity  
     hypophysectomy and, 86  
     survival after evisceration and, 86  
     vagus nerve and secretion of, 174  
 Intestine  
   water absorption in, 388  
 Intestine, large  
   motility of  
     stimulation, 191  
 Intestine, small, 213-18  
   absorption from, 216-18  
     adrenalectomy and, 588  
     of amino acids, 217  
     of chloride, 218  
     choline and, 217  
     of electrolytes, 595  
     of fat, 217  
     of glucose, 216, 217, 588, 595  
     osmotic activity and, 216  
     of penicillin, 194  
     shock and, 216  
     of vitamin A, 217  
     of water, 217-18  
   acetylcholine in, 214, 215  
   cholesterase activity in, 214  
   curare and relaxation of, 172  
   distension of  
     nausea and, 191  
   electrical potentials, 501  
   gastric secretion and, 202  
   motility of, 191, 192, 214-16  
     acetylcholine and, 215  
     action potentials and, 213-14  
     atropine and, 215  
     calcium and, 215  
     fatty acids and, 214-15  
     hemorrhage and, 173, 191  
     hydrolyzed protein and, 215  
     marjolaine oil and, 215

- Intestine, small (*cont.*)  
   motility of (*cont.*)  
     physostigmine and, 215  
     stimulation of, 191  
     temperature and, 214  
     thyroid gland and, 216  
     vagi and, 215  
   secretion of, 216  
 Inulin  
   diffusion through kidney, 227  
   kidney clearance of, 226  
   in nephritis, 227  
   in skeletal muscle, 131  
 Iodine  
   conversion to diiodotyrosine, 70  
   oxidation of thiouracil by, 70  
   in plasma, 71, 72  
   radioactive  
     hyperthyroidism and, 74  
   in thyroid preparations, 72  
 Isohemagglutinins, 335-39

## K

- Ketone bodies  
   cardiac glycogen and, 315  
   excretion of by kidney, 229  
 17-Ketosteroids  
   determination of, 79  
   urinary excretion of, 79-80, 240  
   trauma and, 240  
 Kidney  
   *p*-aminohippurate extraction ratio  
     shock and, 232  
   anoxia and, 232, 237, 239  
     base excretion and, 237  
   antidiuretic substances in urine, 240  
   cirrhosis and, 240  
   blood flow in, 225, 231, 261-62, 393  
   adenosinetriphosphate and, 231  
   anesthesia and, 262, 393  
   aortic pressure and, 267-68  
   fever and, 231  
   heart failure and, 238  
   hemorrhage and, 231, 262  
   infection and, 238  
   renal ischemia and, 232, 233, 262  
   shock and, 231, 233  
   stimulation of renal nerves and, 170  
   pituitary extracts and, 241  
   blood vessels  
     anatomy of, 261-62  
   calcium deposit in, 242  
   cast formation, 242  
   clearance of  
     amino acids, 229-30  
     *p*-aminohippuric acid, 226, 231, 262,  
       309  
     cinchona alkaloids, 230  
     creatinine, 225, 226, 227

Kidney (*cont.*)

- clearance of (*cont.*)
  - diodrast, 226, 227-28, 394, 395
  - inulin, 226, 227, 243, 394, 395, 399
  - mannitol, 226
  - pantothenic acid, 230
  - sulfonamides, 228-29, 583
  - thiosulfate, 226
  - urea, 226, 227, 228, 395, 583
  - uric acid, 228
- damage
  - adrenal cortex and, 244
  - alloxan and, 243
  - anterior pituitary diabetes and, 244
  - chloroform and, 244
  - clearance and, 227
  - lipase and, 243
  - mercury, BAL, and, 243
  - myohemoglobin and, 393
  - phloridzin and, 243
  - phosphatase and, 243
  - plasma lipids and, 247
  - protein and, 243
  - pyridine and, 243
  - sulfathiazole and, 242
  - uranium and, 394
- decarboxylation by, 234
- dihydroxyphenylalanine (Dopa) and, 234
- diuresis
  - anesthesia and, 226
  - caffeine, 237
  - mercurial diuretics and, 237
  - solutes and, 395
  - sulfate and, 394
  - urate clearance and, 228
  - urine osmotic pressure and, 237
  - xanthines and, 394
  - see also* Kidney, water diuresis
- excretion of
  - alkali and acid, 228
  - amonia, 237
  - amino acids, 229, 230, 598
  - bicarbonate, 229
  - chloride, 394, 397, 400
  - $\beta$ -hydroxybutyrate, 229
  - lactate, 229
  - potassium, 236-41
  - sodium, 236-41
  - sodium chloride, 384
  - sulfonamides, 228-29
  - streptomycin, 230
  - thiamine, 230
  - urea after carbohydrate feeding, 230
  - uric acid, 228
  - water, 236-41, 384, 393-96
- excretory ratios, *see* clearance
- failure
  - treatment by peritoneal lavage, 247, 248

Kidney (*cont.*)

- filtration fraction
  - calculation of, 227
- function of
  - changes with age, 228
  - traumatic shock and, 393
- glomerular filtration
  - p*-aminohippuric acid and, 226
  - exercise and, 230
  - heart failure and, 238
  - hemorrhage and, 231
  - hypertension and, 230
  - infection and, 238
  - intravenous local anesthetics and, 231
  - mannitol and, 226
  - pituitary extracts and, 241
  - posture and, 230
  - renal artery occlusion and, 232
  - renal injury and, 227-28
  - shock and, 231
  - volume of, 225-30
  - xanthines and, 394
- gluconeogenesis, 247
- glycogen in, 241
- glycosuria, 237
- growth of, 241
- hypertension and, 234-36, 287-89
- hypertrophy
  - androgens and, 244
  - glomerular, 244
  - pituitary gland and, 242
  - protein and, 241
  - thyroid gland and, 243
  - unilateral nephrectomy and, 241
- innervation of, 164
- ischemia, 232-33
  - p*-aminohippurate clearance and, 232
  - glomerular filtration and, 232
  - tubular changes and, 232
  - see also* Hypertension, experimental
- juxtaglomerular tissue of
  - trauma and, 235
- lipid in, 241
- metabolism of
  - hypertension and, 233
  - thyroid hormone and, 71
- morphology, 241-45
- nephrectomy
  - mitosis and, 242
  - urea formation and, 246
  - vidualysis and, 247
- nephritis
  - albumin injection and, 349-50
  - clearance and, 227
- nephron
  - morphology of, 241
- nephrosis
  - albumin injection and, 349
- nitrogen metabolism of, 234

Kidney (*cont.*)

- oxygen consumption of
  - shock and, 232
- pathology, 242-45
  - crush syndrome and, 242
- pituitary gland and, 240-41
- plasma flow, 225-32
  - exercise and, 230
  - experimental hypertension and, 230
  - posture and, 230
  - renal injury and, 227, 228
  - shock and, 232
  - see also* Kidney, blood flow
- postural oliguria, 230, 238
- posterior pituitary and, 230
- pressor substances
  - formation of, 233
  - hypertension and, 235
  - proteolytic enzymes and, 233
  - renin, 233
- protein in, 242
- proteinuria, 245-47
  - albumin injection and, 246
  - Bence-Jones protein, 246
  - blood lipids and, 246
  - serum cholinesterase and, 245
- respiratory enzymes of, 234
- sodium distribution in, 592
- structure
  - adrenal cortical steroids and, 81
- tubular excretion
  - of *p*-aminohippuric acid, 231
  - of estrogens, 230
  - of sulfonamides, 229
- tubular injury
  - hemorrhagic shock and, 231
- tubular mass
  - p*-aminohippuric acid, 226
  - diodrast, 241
- tubular reabsorption
  - of bicarbonate, 229
  - of creatinine, 231
  - of glucose, 229
  - of lactate, 229
  - of protein, 245
  - shock and, 232
  - of water, 236
- urine volume
  - hypoxia and, 393, 394
  - low sodium diet and, 238
  - sulfate and, 588
- vasoconstriction
  - shock and, 232
- water diuresis
  - adenosinetriphosphate and, 396
  - adrenal cortex and, 385
  - adrenal medulla and, 385
  - carbohydrate feeding and, 230
  - clearance and, 226, 395

Kidney (*cont.*)

- water diuresis (*cont.*)
  - emotional stress and, 239
  - environmental temperature and, 239
  - exercise and, 230, 239
  - inhibition of, 399
  - neurohypophysis and, 396-400
  - posture and, 395
  - production of, 395-96
  - reflex inhibition of, 399

## L

## Lactation, 61-62

- adrenalectomy and, 62
- estrogens and, 62
- hypophysectomy and, 59
- parathyroid glands and, 74
- progesterone and, 62
- skeleton, teeth and, 110-11
- thyroxin and, 62
- see also* Mammary gland

## Lactic acid

- in blood
  - exercise and, 373
  - glycogen synthesis from, 87
  - red cell-plasma ratio, 373
- excretion of, 229

*Lactobacillus casei* factor

*see* Folic acid

## Lactogen

source of, 57

Leukemia *see* Leukocytes, leukemia

## Leukocytes

- antibody formation and, 633
- leukemia
  - chemotherapy of, 661-62
  - colchicine and, 662
- lymphocytopenia
  - adrenal gland and, 83

## Leukotaxine, 629

## Lipids

growth and, 75

## Liver

- antimony in, 658
- arginase
  - adrenal cortex and, 81
- blood flow in, 264
- cirrhosis of, 7
  - alcoholic, 10
  - antidiuretic substance in, 240
  - choline and, 9
  - cystine and, 9
  - serum proteins in, 348
  - thiouracil and, 10, 74
- cytochrome oxidase, thyroid hormone
  - and, 71
- damage
  - shock and, 282

Liver (*cont.*)

- electrolytes in
  - shock and, 592
- fatty infiltration of
  - choline and, 211-12
- glycogen in
  - adrenal cortical hormone and, 80
  - adrenotropic hormone and, 78
  - pituitary extract and, 86
- infectious hepatitis
  - plasma globulins and, 343
- insulin action on, 86
- lipogenesis in, 87
- insulin and, 87
- metabolism of
  - thyroid hormone and, 71
- progesterone inactivation by, 79
- steroid hormones and
  - inactivation of, 643-44
- succinoxidase in
  - thyroid hormone and, 71
- thyroxin inactivation by, 72

Lungs, 443-46

- circulation in, 263
- oxygen exchange in, 583
- pulmonary edema and carotid sinus, 172
- pulmonary embolism
  - coronary insufficiency and, 319

Lymph

- flow
  - in burns, 402
  - pulmonary ventilation and, 402
  - temperature and, 402

M

Magnesium

- of blood
  - exercise and, 151
  - penetration into muscle, 130
  - in teeth, 110

Malignancy, *see* Tumors

Mammary glands, 61-62

*see also* Lactation

Mammillary bodies

- gyrus cinguli, frontal lobe and, 165

Manganese

- dietary, bones and, 110

Mecholyl

- sweating and, 421

Medulla oblongata, 546-48

Melanin

- metabolism
  - adrenal cortex and, 82

Menstruation, 51-53

- in baboon, 52

Mercury

- renal damage and, 243

Metabolism

- of barley seeds, 616
- embryonic, 29-30, 38
  - gradients in, 29
- of gastric mucosa, 200
- growth hormone and, 76
- hypothalamic obesity and, 181
- of mutant bacteria, 610-11
- of organs *see* specific organs
- of *Neurospora*, 614-15
- oxygen consumption, 435-36
- rate of
  - in anesthetized dogs, 425
  - oxygen deficiency and, 429
  - starvation and, 435
- of sperm, 21
- tissue
  - effect of thyroid hormone on, 69
  - fluoroacetate and, 666
  - high oxygen pressures and, 436
  - inhibitors of, 597
  - from thyroidectomized animals, 71

Methionine

- biosynthesis of, 8
- conversion to cystine, 7
- lipotropic action of, 8
- liver cirrhosis and, 9

Methylcholanthrene

- production of mutations and, 606

Methylene blue

- in treatment of Rickettsial infections, 659

Morphine

- in decompression pain, 438
- water diuresis and, 399

Morphogenesis, experimental, 30-39

- chemical agents and, 35-36
- exogastrulation, 35
- induction, 33-35
- physical agents and, 36-37
- pigments patterns, 40
- polarity and symmetry, 30-31
  - dinitrophenol and, 31
  - medullary plate reversal and, 31
- prelocalization, 31-33
- regeneration, 38
- transplantation incompatibilities, 34
- transplantation, natural, 42

Muscle, cardiac, 125-26

- acetylcholine in, 167, 176
- action potentials of, 301
- atropine and, 167
- contractility of, 306-07
- cross striation in, 125
- drugs and, 303, 304
- electrolyte exchange in, 591
- glycogen of, 315
- thyroidectomy and, 316
- inorganic ions and, 304

**Muscle, cardiac (cont.)**

- length-tension diagrams, 125
- nerve endings in, 303
- neuromuscular transmission in, 132
- properties of, 303-06
- radioactive potassium exchange in, 131
- structure of, 167
- temperature and, 303, 304
- viscosity of, 126
- water content of, 315

**Muscle, skeletal, 119-48**

- acetylcholine in, 135
- action potentials of, 136-37, 138-39, 301
- adenine derivatives in, 123
- adenosinetriphosphate in, 127-29
- adrenalectomy and, 82
- ammonia penetration in, 131
- bubble formation and, 437
- contraction of
  - acetylcholine and, 129, 494
  - adenosinetriphosphate and, 128
  - epinephrine and, 132
  - histamine liberation and, 142
  - ion permeability and, 130
  - latency period, 124
  - microscopic structure and, 123
  - pantothenic acid and, 142
  - riboflavin and, 142
  - theories, 132
  - thiamine and, 142
  - velocity constant of, 123
  - viscosity and, 122
- denervated, 139-41
  - adenosinetriphosphate in, 139
  - atrophy of, 138, 139-40
  - curare and, 139
  - fibrillation in, 138
  - histology of, 141
  - myosin in, 140
  - tension loss in, 139-40
  - treatment, 138, 140-41
- elastic properties of, 121-23
- electrical activity of, 136-38
- electrolyte distribution in, 129-32
- electromyography, 138-39
  - in poliomyelitis, 139
- electron microscopy of, 126-27
- exercise and, 149
- fatigue
  - acetylcholine in, 132
- fibrillation in
  - denervation and, 138
- force-velocity relations, 122-23
- immobilized
  - atrophy of, 140
  - myosin in, 140
  - recovery of, 140
- intramuscular pressure, 142

**Muscle, skeletal (cont.)**

- length-tension diagrams, 120-21
    - of myosin threads, 121
    - of sarcolemma, 120
  - mechanical properties of, 120-26
  - metabolism of
    - muscle training and, 149
    - phosphate and, 582
  - microscopic structure of, 123-25, 126-27
    - contraction and, 123-25
  - myasthenia gravis, 135-36
    - acetylcholine synthesis in, 135
    - serum cholinesterase in, 136
  - neuromuscular transmission, 132-35, 463-64
    - acetylcholine and, 132-35
    - atropine and, 133
    - chemical, 176
    - in crustacean muscle, 463, 500
    - end plate and, 133, 463
    - epinephrine and, 132-33
    - physostigmine and, 132
    - procaine and, 133
    - prostigmine and, 132
    - site of mediator liberation, 133
    - stretch and, 132
    - in tenotomy, 134
    - osmotic equilibrium in, 131
  - oxygen consumption of, 141-42
  - permeability of, 129-32
    - to electrolytes, 590-91
  - propagation in, 124
  - reinnervation of, 464
  - temperature of
    - in exercise, 153
  - tension in, 120-21
  - thermoelectricity of, 121
  - tonus, 279
    - ventral root fibers and, 137
  - vasodilatation in, 169
  - water exchange in, 403
  - x-ray diffraction of, 126
- Muscle, smooth**
- curare and, 172
  - electrical potentials in, 501
    - epinephrine and, 501
  - electron microscopy of, 126-27
  - ephedrine and, 172
  - fatty acid utilization by, 87
  - glucose utilization by, 87
  - histamine and, 172
  - sympathomimetic drugs and, 216
  - temperature and, 214
  - x-ray diffraction of, 126
- Muscular exercise, 149-62**
- air temperature, humidity and, 418
  - altitude and, 158
  - altitude pain and, 438
  - basal metabolic rate and, 152

**Muscular exercise (cont.)**

- blood gas transport and, 372-74
- blood glucose and, 151
- blood lactic acid and, 373
- blood magnesium and, 151
- bones and, 149
- cardiac output and, 151
- central venous pressure and, 275
- circulation and, 150-52
- circulatory failure and, 286
- efficiency of, 153
- electrocardiogram in, 150
- energy cost of, 152
- epinephrine in blood and, 151
- erythrocyte sedimentation rate and, 152
- heart rate and, 151
- hyperpnea and, 374
- metabolism and, 152-53
- muscle change from, 149
- muscle temperature in, 153
- ovarian lesions and, 158
- physical fitness tests, 155-59
- race and sex, 158
- rehabilitation of convalescents, 158-59
- renal function in, 230
- respiratory effects of, 150, 374
- sweating and, 153-54
- sympathectomy and, 171
- temperature and, 373, 418
- thermal stress and, 417-20
- tobacco and, 154-55
- uterus and, 158
- water diuresis and, 230, 239, 396
- work output
  - increase in, 154-55

**Mustard gas**

- production of mutations and, 609

**Myasthenia gravis *see* Muscle, skeletal****Myoneural transmission *see* Muscle, neuromuscular transmission****Myosin**

- adenosinetriphosphatase and, 127-28
- in denervated muscles, 140
- filaments
  - electron microscopy of, 127
- in muscle, 128
- muscle contraction and, 120

**N****Naphthylthiourea**

- carbohydrate metabolism and, 666
- as rodenticide, 664
- toxicity of, 665, 666

**Nausea**

- intestinal distension and, 191
- salicylate poisoning and, 201

**Necrosin, 629****Neoantergan, 585, 653-55****Neoantergan (cont.)**

- in allergic diseases, 653
- antihistamine activity of, 654
- toxicity of, 655

**Nerve**

- accommodation phenomena in, 461
- acetylcholine synthesis by, 459
- action potential of
  - diisopropyl fluorophosphate and, 458, 490-91
  - prostigmine and, 458
- anoxia of, 462
- bioelectric potentials in, 477-501
- conduction, 457-63
  - acetylcholine and, 457-59
  - asphyxia and, 461
  - chemical hypothesis of, 457-59, 489-93
  - chemical intermediates in, 489-93
  - electrical hypotheses, 460-63
  - membrane theory and, 460, 479, 485
  - temperature and, 462-63
  - thiamine and, 458
- degeneration of
  - chemical changes in, 459
  - conduction and, 561
- endings
  - adaptation of, 559
  - in skin, 554-55
- ephapse, 461
- excitation of
  - electrical stimuli, 485-86
- impulse
  - propagation of, 487-88
- injury of, pain and, 167
- injury potential
  - hyperventilation and, 166-67
- local excitatory process in, 486-87
- noradrenalin in, 459
- peripheral
  - injury of, 167, 171
- regeneration of, 459-60
  - conduction and, 462
- resting potential
  - inhibitors and, 484
- sympathin in, 459

**Nerves**

- adrenergic
  - anticholinesterases and, 492
- to bone marrow
  - vasoconstriction and, 164
- carotid sinus
  - arterial pressure and, 169
- chorda tympani, 164
  - salivary secretion and, 195
- cutaneous
  - action potentials of, 557
  - properties of, 557, 559
  - skin resistance and, 183

**Nerves (cont.)**

- depressor
    - hypertension and, 235
  - glandular innervation, 165
  - nonmotor ventral root fibers, 464
  - optic
    - single fiber discharges in, 466
  - pelvic autonomic
    - anatomy of, 164
  - peripheral
    - injury of, 171
  - pulmonary vasomotor, 263
  - splanchnic
    - arterial pressure and, 235
    - efferent discharges of, 177
    - ergotamine and action potentials in, 177
    - gall bladder and, 172
    - pancreatitis and, 174
  - vagus
    - arterial pressure and, 177
    - atrioventricular node and, 304
    - cardioaccelerator fibers in, 168
    - esophagus and, 172
    - gastric ulcer pain and, 166
    - heart and, 167-69
    - inhibition and plasma potassium, 168
    - insulin secretion and, 174
    - intestinal musculature and, 215
    - pepsin production and, 200
    - peptic ulcer and, 173
    - reflex center of, 177
    - respiratory control and, 177, 443
    - sinoatrial block, 167
  - vasomotor *see* Vasomotor phenomena
- Nervous system, central**
- acetylcholine synthesis in, 459
  - activity of
    - acetylcholine and, 468-69, 508
  - anterior corpus quadrigeminum]
    - eye movements and, 546
  - autorhythmicity of centers, 472
  - cerebral blood flow
    - determination of, 261
  - colonic motility and, 218
  - decerebration in man, 546
  - degeneration at high oxygen pressures, 436
  - inferior olivary nucleus ascending tract, 500
  - inhibition in, 470-72
  - internuncial neurons conduction in, 466-67
  - invertebrate
    - electrical activity of, 507
  - localization in,
    - mapping of, 500
  - prefrontal leucotomy
    - resistance to drugs and, 182

**Nervous system, central (cont.)**

- somatic functions of, 525-52
    - cerebral cortex, 525-40
  - synaptic transmission in, *see* Synapses
  - transmission in
    - acetylcholine and, 468-69, 508
    - ulcer genesis and, 205
    - vagal reflex centers, 177
- Nervous system, visceral functions of,**
- 163-90
  - afferents, 166-67
    - injury potentials, in, 166
    - pain and, 166
  - anatomy of, 163-77
  - cross-suture experiments in, 469
  - efferents, 167-77
  - hypothalamic centers, 178-82
  - innervation of inner ear, 183
  - see also* Nerves, vagus; Sympathetic nervous system, 33
- Neural crest, 33**
- extirpation of, 165
- Neuromuscular transmission, *see* Muscle, skeletal, neuromuscular transmission**
- Neurons**
- ganglionic
    - secretion granules in, 164
  - internuncial
    - in cat, 547
    - in causalgic pain, 565
    - inhibition and, 472
    - neurotic reaction and, 572
    - properties of, 500
    - reverberating circuits in, 177, 472
    - synchronization of, 473
    - tonus, 474
- Neurosis, experimental, 569-80**
- conditioned reflexes and, 569-70
  - duration of, 569
  - "endogenous" anxiety and, 571
  - etiology of, 573-77
    - age and, 573
  - feeding competition, 578
  - human mental disorders and, 570-73
  - internuncial neurons and, 572
  - pathological tension and, 571
  - pollakiuria in, 577
  - production of, 574-77
  - self-perpetuation of, 572
  - sexual manifestations of, 577
  - war neuroses and, 572
- Neurospora**
- mutants of, 613-15
    - growth requirements of, 614-15
    - temperature and, 614
- Nikethamide**
- bleeding volume and, 279
- Nitrogen**
- aeroembolism and, 368



- Nitrogen (*cont.*)  
 in blood, 368  
 clearance from blood, 368  
 elimination from tissues, 437  
 in respiratory gas  
   determination of, 359  
   retention of, 76  
 Nitrogen metabolism  
   androgens and, 77  
   growth hormone and, 76  
 Noradrenalin  
   in sympathetic nerves, 459  
 Nuclei  
   differentiation of, 3  
 Nucleic acids  
   cell division and, 28  
   in unfertilized egg, 24  
 Nucleotide  
   in acinar cells of pancreas, 210  
 Nutrition  
   prenatal deficiencies, 62-63

## O

- Ossification, ectopic, 103, 106  
 Ovary  
   adrenal cortical function of, 56  
   lesions of  
     exercise and, 158  
 Ovulation  
   anterior pituitary hormone and, 23  
   fertilization and, 55  
   in macaques, 52  
   *in vitro*, 23  
 Oxygen  
   arterial  
     altitude and, 369  
     exercise and, 373, 374  
     oxygen breathing and, 365-66  
   in blood  
     A-V difference, 363  
     altitude and, 369-71  
     hyperventilation and, 362  
     oxygen deficiency and, 448  
   determination in respiratory gas, 359  
   high pressures of, 436-37  
   cardiac output and, 437  
   central nervous system degeneration  
     and, 436  
   effects of continued administration,  
     437  
   motor disabilities and, 436  
   pyloric sphincter and, 436  
   red blood cell permeability to, 582  
   in venous blood, 362  
 Oxygen deficiency  
   acapnia and, 440  
   adrenal cortex and, 84  
   adrenotropic hormone and, 77

- Oxygen deficiency (*cont.*)  
   age and, 429  
   altitude  
     acclimatization to, 368  
     hyperventilation and, 370  
     improved tolerance to, 371  
   arterial oxygen saturation in, 448  
   arterial pressure  
     sympathomimetic drugs and, 434  
   blood gas transport and, 371  
   blood picture in, 430, 431  
   body temperature and, 429  
   capillary permeability and, 431  
   carbon dioxide in, 439  
   carbon monoxide and, 372, 435  
   carbonic anhydrase and, 364  
   cerebrospinal fluid pressure and, 431  
   digestion and, 431  
   electroencephalograms and, 432  
   exercise and, 158  
   fainting during hemorrhage and, 431  
   fetal, 430  
   gastric secretion and, 201  
   heart rate and, 304  
   hyperreactivity to, 370  
   hypothalamic lesions and, 179  
   insulin and, 87  
   liver glycogen and, 430  
   metabolism and, 429  
   of nerve, 462  
   pregnancy and, 430  
   renal function and, 232, 239  
   resistance to, 433-34  
     adrenal cortical extract and, 434  
     diet and, 371, 433, 434  
     insulin and, 434  
     pathological states and, 434  
   respiratory rate and, 432  
   syncope and, 438  
   thiouracil and, 74  
   tolerance to  
     ammonium chloride and, 372  
     cytochrome C and, 372  
     food intake and, 372  
     ultraviolet irradiation and, 372  
   vasomotor phenomena and, 272  
   vision and, 432, 434

## P

- Pain, 166-67, 171, 303, 318, 424, 438, 478,  
 553, 557-58, 561-62, 565-66  
   anginal, 169, 318  
   cardiac nerves and, 303  
   causal, cause of, 166  
   decompression and, 438  
   neural mechanism of, 478  
   temperature gradients and, 424  
   uterine  
     section of hypogastric plexus and, 166

- Pain (cont.)**  
 of venous origin  
   sympathetic block and, 171  
 visceral  
   sympathetic nerve section and, 166  
*see also* Sensations, cutaneous, pain
- Pancreas**  
 acinar cells of, 210  
   secretin and, 211  
 of birds  
   alloxan and, 91  
 denervation of, 174  
 disease of  
   diagnosis of, 212  
 duct systems of, 210  
 exocrine cell spectrogram, 210  
 of frog  
   alloxan and, 91  
 grafts of, 88  
   insulin secretion after alloxan and, 91  
 innervation of, 164, 165, 210-11  
 islets of  
   fat and, 88  
   glycogen and, 88  
   hypertrophy of, 89  
 pancreatectomy, 88, 91, 212-13  
   alloxan and, 91  
   in man, 88  
 pancreatitis, 210  
 secretin and vitamin K and, 211  
 secretion of  
   cobalt in, 211  
   electrophoretic analysis of, 211  
 of toad  
   alloxan and, 91
- Pantothenic acid**  
 work output of muscle and, 142
- Papaverine**  
 angina pectoris and, 318
- Parasympathetic nervous system**  
 innervation of pancreas, 164  
*see* Nerves, vagus
- Parathyroid gland, 74-75, 104, 108, 109**  
 blood calcium and phosphorus and, 109  
 calcium salts and, 74  
 electroencephalogram and, 74  
 hormone of  
   decalcification and, 104  
 hypertrophy of after nephrectomy, 75  
 lactation and, 74  
 nephrectomy, serum calcium and, 108  
 serum calcium and, 108, 109  
 strontium and, 75  
 vitamin D and, 74
- Pavitrine**  
 antispasmodic action of, 652-53
- Penicillin**  
 absorption of  
   liver and, 194
- Penicillin (cont.)**  
 absorption from alimentary tract, 194  
 cleavage of eggs and, 28  
 detoxification of, 643  
 endocarditis and, 302  
 in human fetal blood, 61  
 resistance of bacteria to, 611-12
- Pepsin**  
 estimation of, 200  
 secretion, 200
- Peripheral circulation, 169, 255-300, 415**  
 dynamics of, 255-56  
 of hand  
   body temperature and, 169  
   environmental temperature and, 415  
   hemorrhage and, 286  
   hemorrhagic shock and, 259  
   in malaria, 283  
   nervous control of, 272-73  
   streamline flow and, 264-65  
   in traumatic shock, 283  
*see also* Arterial pressure; Capillaries, Vasomotor phenomena; etc.
- Peripheral resistance, see Vasomotor phenomena**
- Peristalsis, see Intestine, motility of**
- Permeability, 581-604**  
 of artificial membranes, 587-88, 594-95  
 of body surfaces, 586  
 detergents and, 586  
 drugs and, 586-87  
 to dyestuffs, 589  
 to ions, 589-97  
 of plant cells, 583, 593-94  
 of skeletal muscle  
   electrolytes and, 129-32  
 of skin  
   membrane potentials and, 592  
 species specificity and, 582  
 to sulfonamides, 582  
 to water, 581-88  
 to weak electrolytes, 588  
*see also* specific organs and tissues
- Pernicious anemia, see Anemia, pernicious**
- Peroxidase**  
 inhibition by sulfanilamide, 70  
 inhibition by thiourea, 70
- Pharmacology, 651-72**
- Phenol**  
 detoxification of, 642
- Phloridzin**  
 renal damage and, 243
- Phosphatases**  
 alkaline  
   adrenal cortex and, 81  
   anterior pituitary and, 78  
   cyanide and, 244  
   renal damage and, 243

- Phosphatases (*cont.*)  
  in bone and teeth, 106-07  
  of chromosomes, 609  
  in degenerating nerves, 459
- Phosphates  
  uptake by bone, 106
- Phosphates, of bone, *see* Bone
- Phosphorus  
  in blood, 168  
    estrogens and, 109  
    insulin and, 86  
  parathyroid gland and, 109
- Physostigmine  
  cardiac muscle and, 303, 304  
  intestinal motility and, 215  
  nerve action potential and, 458, 490  
  neuromuscular transmission and, 133  
  reflexes and, 468
- Pituitary, anterior  
  adrenocorticotrophic hormone of, 77-78  
    adrenal gland, 77  
    adrenal hormone and, 108  
    anoxia and, 77  
    chemistry of, 77  
    glycosuria and, 78, 89  
    growth hormone and, 108  
    hypertension and, 290  
    osteogenesis, 108  
    temperature and, 175-76  
    urinary nitrogen and, 78  
  adrenotropic hormone of  
    *see* adrenocorticotrophic hormone of  
  alloxan and, 90  
  blood calcium and, 109  
  diabetes and, 75, 89  
  diabetogenic extract  
    islet hypertrophy and, 89  
  environmental temperature and, 175  
  glucose utilization and, 85  
  glycogen synthesis and, 85  
  gonadotropic hormone of  
    castration and, 58  
    *see also* Gonadotropic hormones  
  growth hormone, 75-76  
    isolation and properties of, 75  
    metabolic rate and, 76  
    nitrogen excretion and, 75  
    regeneration and, 76  
    skeletal aging and, 109  
    skeletal growth and, 107-08  
    water content of tissues and, 76  
  insulin hypoglycemia and, 86  
  lactogen and, 57  
  peripheral action of, 86  
  thyrotropic hormone  
    activation of thyroid gland by, 70, 175  
    exophthalmos and, 71  
    inactivation of, 71  
    metabolic rate and, 71
- Pituitary, anterior (*cont.*)  
  thyrotropic hormone (*cont.*)  
    oxidation-reduction potentials and, 71  
    purification of, 71  
    secretion  
      control of, 70  
  water diuresis and, 240
- Pituitary gland  
  alloxan diabetes and, 91, 92  
  of armadillo  
    innervation of, 175  
  diabetes and, 89  
  environmental temperature and, 175  
  growth cartilages and, 107  
  hypertension and, 290  
  insulin sensitivity and, 86  
  insulinotropic principle, 87-88  
  liver glycogen and, 86  
  muscle glycogen and, 86  
  pituiratin  
    renal function and, 241  
    water intoxication and, 385  
  pregnancy and, 59  
  relationship to gonads, 57-58  
  renal hypertrophy and, 242  
  spermatogenesis and, 55  
  water diuresis and, 396
- Pituitary, posterior  
  antidiuretic hormone, 397-98  
    in human blood, 397  
    release of, 398  
    tubular reabsorption and, 397  
  pitocin  
    renal function and, 241  
  pitressin  
    renal clearance and, 397  
    renal function and, 241  
    postural oliguria and, 230, 238  
    water diuresis and, 240, 396-400
- Placenta, 59-60  
  dominance of in pregnancy, 59  
  extracts of  
    antibody contents, 342  
  histochemistry of, 60  
  permeability of, 61, 583  
  sodium transfer in, 592
- Plasma  
  administration in shock, dehydration and, 346-47  
  bicarbonate of  
    renal regulation, 229  
  contents, *see also* specific substances  
  derivatives of, 327-56  
  electrolytes of  
    renal regulation of, 237  
  esterase of, 345  
  fibrinolytic enzyme, *see* Trypsin

- Plasma (*cont.*)  
   lipids of  
     renal damage and, 247  
   lipoprotein in, 344  
   proteins, *see* Proteins, plasma  
   renin activator in, 344  
   volume  
     albumin and, 402  
 Plasmin, *see* Trypsin  
 Poliomyelitis  
   chemotherapy of, 660  
   plasma globulins and, 343  
 Posture  
   cerebellum and, 545-46  
 Potassium  
   blood level in shock, 284  
   carbohydrate metabolism and, 132  
   cardiac muscle, 131  
   deficiency of  
     heart pathology and, 315  
   excretion of, 236-41  
   gastric acid formation and, 200  
   in muscular contraction, 132  
   muscle permeability and, 589-91  
   muscle potentials and, 137-38  
   in nerve conduction, 489  
   radioactive, distribution of, 130  
   resting potentials in nerve and, 484  
   in skeletal muscle, 129-32  
   in shock, 129  
   vagus nerve inhibition and, 168  
 Potassium phosphate  
   cardiac activity and, 314  
   intracisternal administration  
     traumatic shock and, 168  
 Pregnancy, 58, 61, 110-11, 203, 286, 429  
   adrenal gland and, 59  
   anoxia and, 429  
   atomic bomb action and, 58  
   circulatory failure in, 286  
   diabetes and, 61  
   hormones of, 60-61  
   hypochlorhydria and, 203  
   pituitary gland and, 59  
   skeleton, teeth and, 110-11  
   tests, 61  
   vasodepression in, 286  
 Prenandiol, 61  
 Pregnenolone  
   psychomotor tests and, 82  
   work and, 82  
 Prisol  
   blood flow and, 272  
 Privine  
   blood flow and, 272  
 Procaine  
   neuromuscular transmission and, 133  
 Progesterone  
   adenosinetriphosphatase and, 56  
   body temperature and, 52  
   Progesterone (*cont.*)  
     estrogens and, 57  
     inactivation of, 79  
     lactation and, 62  
     reproductive cycle and, 53  
     uterine water content and, 401  
 Prostigmine  
   nerve action potential and, 458, 490  
   neuromuscular transmission and, 132  
   prefrontal leucotomy and, 182  
 Proteins  
   deficiency of  
     gastric lesions and, 199  
     ulcers and, 206  
   in diet  
     antibody production and, 633  
   hydrolyzed  
     intestinal motility and, 215  
   iodinated, 69  
   in kidney, 242  
   solubility of, 327-29  
     ethanol and, 329  
     pH and, 328  
     temperature and, 328, 329  
   in urine, 245-47  
 Proteins, plasma  
   adrenal gland and, 82  
   albumins *see* Proteins, serum  
   blood pH and, 373  
   fraction I, 330-34  
     antihemophilic activity of, 333, 334  
     contents, 331, 333  
     preparation of, 330-31  
   fraction II+III, 334-43  
     antibodies in, 340  
     conjugated proteins in, 334  
     estrogen in, 335  
     isohemagglutinins in, 337-38  
     lipoproteins in, 335  
     preparation of, 334  
     subfractionation of, 335-36  
   fraction IV, 343-45  
     preparation of, 343-44  
     renin activator in, 344  
     subfractionation of, 345  
   fraction V, 345-50  
     preparation of, 345  
   fractionation of, 327-30  
   globulins *see* Proteins, serum  
   hypoproteinemia  
     albumin administration and, 348  
   precipitation of, 327  
   solubilities of, 327, 328  
 Proteins, serum  
   albumins  
     dehydration and, 346-47  
     salt poor, 348-49  
     in fraction V, 346  
     liver cirrhosis and, 348, 350  
     purification of, 345

Proteins, serum (*cont.*)albumins (*cont.*)

- shock and, 346, 347
- stabilization of, 349-50
- as stabilizing protein, 350
- thermal stability of, 348

## albumin injection

- anemia and, 348
- blood coagulation and, 347
- circulatory dynamics and, 347-48
- hemodilution and, 348
- hypoproteinemia and, 348
- immunity and, 347
- kidney disease and, 349-50
- nutritional value of, 349-50

## genes and, 620-21

## globulins

- antibodies and, 640
- euglobulin, 333
- infraction II+III, 334, 337

## hemolytic streptococcal infections and, 343

## infectious hepatitis and, 343

## liver cirrhosis and, 348

## measles and, 341-42

## mumps and, 342

## poliomyelitis and, 343

## precipitation of, 339

## separation of, 340

## solubility of, 327, 328, 329

## species differences in, 620-21

## Prothrombin

- in plasma protein fraction II+III, 334, 336

## Pupil

- mydriatic drugs, 652
- reflex dilatation of, 178

## Pyrexin, 629

## Pyribenzamine

- antihistamine action of, 654
- toxicity of, 655

## Pyridoxine

- leucocyte respiration and, 74
- leucopenia after thiouracil and, 74

## Pyruvic acid

- cardiac metabolism and, 315

## Q

## Quinine

- detoxification of, 643

## R

## Red blood cells

- altitude and, 369, 431
- destruction by methylene blue, 659
- hemolysis of, 592-93
  - temperature coefficient, 592
- permeability of
  - amino acids and, 589
  - to lead, 593

Red blood cells (*cont.*)permeability of (*cont.*)

- to oxygen, 582
- temperature and, 582
- thiourea and, 582
- tissue extracts and, 582

## radioactive

- circulation time by, 260

## sedimentation rate

- in exercise, 152

## Reflexes, 177-78

- after-discharge, 469
- anoxia and, 177
- carotid-pulmonary, 172
- carotid sinus, *see* Carotid, sinus
- chemoreceptor, 177
- conditioned
  - vasomotor, 177

## Hering-Breuer

- in artificial respiration, 447

## knee jerk

- physostigmine and, 468
- monosynaptic, inhibition of, 471
- pupillary dilation, 178
- spinal, 467
- vagal pulmonicorony, 177
- vasomotor, *see* Vasomotor phenomena

Renin, *see* Kidney, pressor substancesReproduction, *see* Ovary, Ovulation, Semen, Spermatozoa, Testes, Uterus, etc.; *also* individual hormones

## Respiration, 429-56

## alveolar air

- gas analysis, 444, 448
- pCO<sub>2</sub>, 363
- pO<sub>2</sub>, 361

## artificial

- in experimental resuscitation, 446-48
- Hering-Breuer reflex and, 447
- injury from, 447
- mechanical, 447-48
- methods, 447-48

## centers

- activation of, 168
- survival of, 178, 434

## cerebral arterial pressure and, 441

## chemoreceptors and, 117, 442

## control of, 150, 440-43

- acetylcholine and, 440
- carbon dioxide and, 441
- chemoreceptors and, 177
- during work, 422

- multiple factor theory of, 441-42
- vagus nerve and, 177, 443

## in diving mammals, 374

## exercise and, 150, 372, 422

## at high altitudes, 368-72

## hyperventilation

- cortical electrical activity and, 182
- emotion and, 440

- Respiration (*cont.*)  
 hyperventilation (*cont.*)  
   metabolic rate and, 150  
   nerve injury potentials and, 166  
 in hypothermia, 411-12  
 intrathoracic pressure  
   circulation and, 445  
   methods of recording, 448  
 "pressure breathing," 371, 443-44  
   renal function and, 230  
 pulmonary circulation time, 443  
 pulmonary ventilation  
   arterial oxygen saturation and, 445  
   blood flow and, 440  
   evaporative water loss and, 389  
   salivary gland secretion and, 195  
 rate of  
   anoxia and, 432  
   temperature and, 443  
   vital capacity, 445
- Rh antigen  
 erythroblastosis fetalis and 619-20  
 sensitization to, 619  
 subtypes, 618
- Rh typing material  
 preparation of, 338
- Rheumatic fever  
 exercise and, 159
- Riboflavin  
 work output and, 142, 154
- Rickettsial infections  
 chemotherapy of, 659-60
- Rodenticides  
 effectiveness of, 665
- S**
- Salivary glands, 195-96  
 electrograms from, 195  
 innervation of, 165  
 secretion of, 195  
   dehydration and, 386  
   oxidation-reduction potentials, 196  
   pulmonary ventilation and, 195
- Sarcoma, *see* Tumors
- Semen  
 hyaluronidase in, 54  
 normal, in man, 55
- Sensations, cutaneous, 553-68  
 anatomical basis of, 554-57  
 causalgia, 564  
   relief of, 565  
   vasomotor phenomena and, 565  
 central representation of, 560-62  
 cold, 553, 563  
 cutaneous afferent nerves and, 557  
 distribution, 554  
 hyperalgesia  
   mechanism of, 562, 563  
   vascular changes and, 563
- Sensations, cutaneous (*cont.*)  
 itching, 553, 561, 563  
 localization of, 560  
 loss of, 557, 561  
 modalities, 553  
 nerve endings and, 554-55  
 nerve severance and, 556  
 pain, 553, 557  
   cortical representation of, 561  
   double pain response, 558  
   localization of, 560-62  
   nerve nets and, 555  
   phantom limb, 561, 565-66  
   protopathic, 563  
   threshold, 561-62, 563  
   types of, 558  
 receptors adaptation and, 559  
 tickle, 553, 561  
 touch, 553, 557, 561  
 vibratory, 553, 560
- Serum  
 content, *see* specific substances  
 hemophilia and, 333
- Sex  
 determination of, 40  
 reversal of, 39, 56  
   adrenal cortical hormones and, 56  
   thiourea toxicity and, 73
- Sex hormones *see also* Androgens; Estrogens; Gonadotrophins; Progesterone; Pituitary gland; and Testosterone
- Shock  
 adenosinetriphosphate in, 129  
 albumin administration in, 346-47  
 anaphylactic  
   acetylcholine and, 176  
 anesthetics and, 285  
 anuria in, 393  
 bacterial toxemia and, 284  
 blood vessels in, 281-83  
 capillary permeability in, 586  
 causation of, 278, 283  
 circulatory changes in, 169  
 drugs and, 285  
 environmental temperature and, 422  
 hemoconcentration and, 279-80  
 hemodynamics of, 169, 278-87  
 hemorrhagic  
   liver damage and, 282  
   peripheral circulation in, 259  
 intestinal absorption and, 216  
 intramuscular pressure, in 142  
 irreversible, 278-79  
 nervous factors in, 284  
 oxygen therapy of, 446  
 peripheral circulation in, 283  
 plasma administration in, 346  
 potassium in, 129, 168  
 regional peripheral resistance and, 280-81

Shock (*cont.*)

- renal blood flow in, 231-33
- renal clearance and, 262
- renal function and, 231
- therapy, 285-86, 446
- total peripheral resistance and, 280
- toxic agents and, 284
- venopressor mechanism and, 279
- venous pressure in, 307

Shock, traumatic

- intracisternal potassium and, 168

Skeletal muscle, *see* Muscle, skeletal

Skeleton, *see* Bone

Skin

- electrical resistance of, 557, 595
- electrolyte distribution in, 592
- dermatitis from fungicides, 656
- grafts in mice, 6
- innervation of hair follicles of, 555
- mediation of sensations by, 553-54
- nerve endings and, 553, 554
- preservation for grafts, 6
- receptors
  - adaptation of, 559
  - after-discharge of, 559
  - see also* Sensations, cutaneous
- temperature
  - activity sweat response and, 418
  - transplantation of, 5-6
  - water content, 401
  - water loss and, 390

Sleep

- cerebral cortex and, 181
- hypothalamus and, 181

Sodium

- bone uptake of, 106
- clinical hypertension and, 235
- excretion of, 236-41
- experimental hypertension and, 236
- in muscle, 129-32
- muscle permeability and, 589-91
- retention of
  - adrenal cortex and, 240
  - in heart failure, 238
- urine volume and, 238

Sodium chloride

- circulatory failure and, 285
- desoxycorticosterone toxicity and, 83
- intake
  - composition of sweat and, 392, 421

Spermatozoa

- chromosomes in, 20
- count, atomic bomb and, 55
- development of, 20, 21
- hypophysectomy and, 55
- fertility of, 55
- metabolism of, 21, 54
- temperature and, 22

Spinal cord

- after-discharge in, 469

Spinal cord (*cont.*)

- anterior horn cells
  - chromatolysis of, 547
- cutaneous sensations paths in, 554
- discharge zone of, 499
- electrical activity in, 466-67
- electrospinogram, 473
- facilitation in, 466-67
- grey matter
  - spontaneous activity of, 473
- hemisection of, 546
- inhibition, 470-72
- monosynaptic reflexes in, 471
- motor cells of, 547
- organization in, 499-500
- subliminal fringe and, 499
- summation in, 466-67
- tracts of, 547
- transection of, 546, 547
- vasomotor centers
  - inhibition of, 177

Starvation

- oxygen consumption and, 435

Steroids

- urinary excretion of, 79

Stomach

- action potentials of, 198-99
- cancer of, 199
- gastric mucosa
  - calcium deficiency and lesions of, 199
  - inattention and lesions of, 199
  - metabolism of, 200
  - protein deficiency and, 199
  - salicylate poisoning and, 201
  - thiamin deficiency and, 199
- hypersecretion in, 199
- motility of
  - atropine and, 198
  - dibutoline and, 198
  - dietary fat and, 197
  - exsanguination and, 191
  - starvation and, 198

secretion of

- acid, 200, 201, 596
- age and, 201
- alcohol and, 202
- anoxia and, 202
- benadryl and, 201
- caffeine and, 202
- calcium in, 204
- electrical potentials and, 595-96
- histamine and, 200-01, 202
- hormone inhibition of, 203
- inactivation of, 202
- intestinal contents and, 202
- mucus, 204
- neutral red and, 201
- nocturnal, 206

- Stomach (*cont.*)  
 secretion of (*cont.*)  
   pepsin, 200  
   pregnancy and, 203-04  
   pylorus and, 203  
   thiamine and, 204
- Stomach  
 ulcers of  
   intrinsic factor and, 205
- Streptokinase  
 serum tryptase activation and, 337
- Streptomycin  
 excretion of, 230  
 in human fetal blood, 61
- Strontium  
 parathyroid glands and, 75
- Strychnine  
 tetanus  
   oscillographic study of, 473
- Succinoxidase  
 sulfanilamide and, 70  
 thyroid hormone and, 71
- Sulfanilamide  
 succinoxidase and, 70  
 thyroid oxidation-reduction potentials  
   and, 70
- Sulfathiazole  
 renal damage and, 242
- Sulphydryl-containing compounds  
 alloxan diabetes and, 92  
 detoxification by, 662-64
- Sulfonamides  
 detoxification of, 641  
 kidney excretion of, 228-29  
 permeability of bacteria to, 582
- Supporting tissue, physiology of, 103-18  
*see* specific structures, bone, cartilage,  
 etc.
- Supraoptic tract  
 antidiuretic hormone and, 398
- Sweat  
 body fluids and, 420-23  
 collection of, 391  
 composition of  
   salt intake and, 392  
   dietary essentials in, 420-21  
   electrolytes in, 421  
   metabolites and, 420-23  
   secretion rate, 391-93, 421-22
- Sweat glands  
 absence of, 392  
 atrophy of, 392  
 enumeration of, 421  
 secretion of  
   acclimatization and, 392  
   activity and, 418  
   dehydration and, 386
- Sweat glands (*cont.*)  
 secretion of (*cont.*)  
   environmental temperature and, 391,  
     392  
   skin temperature and, 418
- Sympathetic nervous system  
 arrangement of ganglia in, 164  
 blood vessels and, 169-72  
 carotid sinus and, 272  
 contraction of urinary bladder and, 175  
 dermatomes and, 163  
 efferent fibers of  
   sensory fiber stimulation and, 166  
 of fetal whale, 166  
 ganglia  
   after-discharge in, 470  
   electrical potentials in, 474  
 ganglionic transmission in, 176-77  
 reactivity of  
   aging and, 183  
 segmental effects in, 183  
 sympathectomy  
   blood picture and, 175  
   circulation and, 171  
   electrocardiogram and, 168  
   hypertension and, 288  
   phantom pain and, 166  
   skin resistance and, 163  
   thrombophlebitis and, 171  
   vasomotor phenomena and, 177  
 urinary organs and, 174
- Sympathin  
 in nerve, 459
- Synapses  
 artificial  
   causalgic pain and, 166  
   *see also* Ephapse  
 in dorsal root ganglia, 176  
 potentials in, 464-67  
 transmission in, 464-72, 493-97  
   acetylcholine and, 465-66, 468, 493  
   anesthetics and, 465  
   curare and, 465  
   "electrotonic theory" and, 489  
   strychnine and, 465

## T

- Taste  
 permeability and, 582
- Teeth  
 calcification of, 106  
 caries  
   diet and, 195  
   fluorine and, 110  
 lactation and, 110-11  
 magnesium in, 110  
 mineral substance in, 105  
 phosphatase in, 106-07  
 pregnancy and, 110-11



- Temperature  
cardiac muscle and, 303, 304  
Creaper embryos and, 41  
heat loss  
  blood flow and, 259  
  muscle tension and, 121  
  nerve conduction and, 462-63  
  physiological effects of, 409-28  
  polyploids and, 39  
  rectal  
    environmental temperature and, 420  
  red blood cell permeability and, 582  
Temperature, body  
arterial pressure and, 256  
blood flow and, 169, 258  
estrogens and, 52  
fever  
  circulatory failure and, 286  
  heat balance and, 417  
  hyperthermia and, 419  
    blood carbon dioxide and, 411  
    blood circulation and, 412  
    blood sugar and, 412, 413  
    blood viscosity and, 412  
    heart failure and, 411, 412  
    heat production and, 410  
    hemoglobin and, 412  
    leucocyte count and, 412  
    muscular rigidity and, 411  
    respiration and, 411-12  
    resuscitation from, 412-15  
    reversibility of, 411  
  oxygen deficiency and, 429  
  pain and, 424-25  
  psychic stimulation and, 424  
  rectal  
    work and, 420  
  regulation of, 422  
  twin embryos and, 37  
Temperature, environmental  
adaptation to, 418  
adrenocorticotrophic hormone and, 175-76  
cold  
  absolute tolerance to, 409-10  
  fatal exposure to, 409-17  
  frost bite and, 416  
  heat balance and, 417  
cold tolerance  
  diet and, 416  
  psychosomatic factors and, 416  
epidemic diseases and, 424  
genic action and, 609  
hand circulation and, 415  
heat  
  resuscitation from hypothermia and, 412  
  tolerance to, 418  
  work and, 420  
Temperature, environmental (*cont.*)  
heat loss  
  air movement and, 419  
  heat stress, 420, 423  
  lymph flow and, 402  
  muscular exercise and, 373, 418  
  nutrition and, 422  
  pituitary gland and, 175  
  rectal temperature and, 420  
  respiratory responses and, 443  
  shock and, 286, 422  
  solar heat load, 419  
  solubility of proteins and, 328, 329  
  standard thermal stress, 417-20  
  sweating and, 153, 391-92  
  thyroid activation and, 70, 71  
  thyroid gland and, 175  
tropics  
  debilitating effects of, 420  
  appetite mechanisms and, 423  
  water balance and, 239, 422  
  water diuresis and, 239  
Tendon  
  water content of, 401  
Testes  
  irradiation of in mice, 56  
Testosterone  
  cartilage growth and, 108  
  detoxification of, 643  
  growth and, 77, 108  
  growth hormone and, 108  
  hypophysectomy and, 55  
  mating behavior and, 53  
  seminal vesicles and, 57  
  skeletal atrophy and, 108  
  *see also* Androgens  
Tetanus toxin, 635  
Thalamus  
  cerebral cortex and, 530-31  
  deficiency of  
    alloxan diabetes and, 91  
    electrocardiogram and, 315  
    gastric lesions and, 199  
  degeneration in, 165  
  in degenerating nerves, 459  
  gastric secretion and, 204  
Thiamine  
  kidney excretion of, 230  
  nerve conduction and, 458, 489  
  oxygen deficiency and, 434  
  work output and, 154  
  work output of muscle and, 142  
Thiourea  
  adrenal cortex and, 74  
  angina pectoris and, 316  
  leucopenia and, 74  
  liver fat and, 72  
  thyroid oxidation-reduction potentials and, 70

- Thiourea (cont.)**  
 toxicity of, 73, 664  
   age and, 73  
   sex and, 73  
   thyroid gland and, 73
- Thiouracil**  
 blood and, 73  
 cytochrome oxidase and, 70  
 dehydration and, 386  
 estrous cycle and, 74  
 leucopenia and, 74  
 leucocyte respiration and, 74  
 leukemia and, 74  
 liver cirrhosis and, 74  
 oxidation by iodine, 70  
 oxygen deficiency and, 74  
 thyroid disease and, 73  
 thyroid hormone production and, 71  
 transmission through egg, 73
- Thirst**  
 water requirement and, 383
- Thrombin**  
 inhibition of, 335  
 in plasma protein fraction II+III, 336
- Thyroglobulin, see** Thyroid gland
- Thyroid gland**  
 activation of  
   cold and, 70  
   alloxan diabetes and, 92  
   antimony in, 658  
   blood vessels of, 73  
   colloid oxidation-reduction potential of, 70  
   cytochrome oxidase and, 71  
   environmental temperature and, 175  
   heart failure and, 316  
   hormone production of, 72  
   hyperthyroidism  
     radio active iodine and, 74  
   intestinal motility and, 216  
   metabolic functions of, 69-74  
   peroxidase reactions in, 71  
   pregnancy and, 59  
   proteolytic enzymes in, 71  
   skeletal growth and, 107, 108  
   succinoxidase and, 71  
   thyroglobulin and, 70  
   thyroidectomy  
     renal hypertrophy and, 243  
   thyroxin determination in, 71
- Thyroxin**  
 action of  
   liver and, 72  
   species differences and, 72  
 determination of, 71  
 formation of, 70  
 growth and, 76  
 hypercalcemia and, 109  
 lactation and, 62
- Thyroxin (cont.)**  
 mineral metabolism and, 72, 109  
 muscle oxygen consumption and, 141-42  
 radioactive, 71  
 skeletal senescence and, 109
- Toxins, purification of, 635**
- Tryptase**  
 in plasma, 337
- Tuamine**  
 shock and, 285
- Tumors**  
 avidin and, 662  
 cells of  
   inductors and, 2-3  
   chemotherapy of, 661-62  
   classification of, 4-5  
   of colon, 219  
   enzymes patterns in, 11  
   estrogen levels and, 662  
   genetics and, 623  
   growth of, 1  
   of hypothalamic nuclei, 165  
 irradiation of, 2  
 malignant  
   bacterial toxins and, 12, 13, 15  
   chemotherapy of, 12  
   nitrogen mustards and, 15  
   urethane and, 13, 14, 661  
   of salivary gland, 2  
   thiamine and, 662

## U

- Ulcer, duodenal**  
 burns and, 205
- Ulcer, gastric**  
 bilateral vagotomy and, 166
- Ulcer, gastroduodenal**  
 splachnectomy and, 174
- Ulcer, peptic, 166, 173, 174, 204-10**  
 autogestation and, 206  
 azotemia and, 207  
 blood sugar and, 205  
 central nervous system and, 205  
 diet and, 205, 210  
 emotion and, 205  
 healing time, 207  
 heredity and, 205  
 medical management of, 207-08  
 surgical management of, 208-09  
 temperature and, 206  
 vagus and, 166, 173
- Urea**  
 in blood  
   vividialysis of, 247  
 excretion and clearance, *see* Kidney  
 formation  
   nephrectomy and, 246

- Ureter
  - megaureter
    - lumbar sympathectomy and, 174
- Urethane
  - leukemia and, 661-62
    - tumor therapy and, 13, 14, 661-62
- Urine, *see* Kidney
- Urogastrone, 203
- Uterus, 60, 166
  - orientation of embryo in, 60
  - pain
    - sympathetic nerve section and, 166
  - relaxation of
    - drugs and, 653
  - retroversion of
    - exercise and, 158

V

- Vaginal smears, 53
- Vasomotor phenomena
  - arterial pressure and, 272
  - bone marrow nerves and, 164
  - brain potentials and, 513, 514
  - of bronchial vessels, 263
  - carotid body and, 272
  - carotid sinus and, 272
  - causalgia and, 565
  - cold tolerance and, 416
  - conditioned reflexes and, 177
  - dehydration and, 286
  - direct observation studies, 281-83
  - drugs and, 272
  - exercise and, 286
  - fever and, 286
  - of gastrointestinal vessels, 178
  - hemorrhage and, 286-87
  - hypotension
    - curare and, 171
  - of nasal mucosa, 259
  - oxygen deficiency and, 272
  - peripheral nerve injuries and, 171
  - peripheral resistance, 264-71, 284
    - arterial pressure and, 270
    - blood viscosity and, 264
    - calculation of, 267, 269
    - cardiac output and, 273
    - cerebral ischemia and, 284
    - shock and, 280
    - turbulence and, 264
    - units of, 271
    - vessel diameter and, 264-65
  - postinfective states and, 286
  - pregnancy and, 286
  - pressor and depressor centers, 178
  - pressure-flow relations and, 268-69
  - prolonged recumbency and, 286
  - pulmonary, 263
  - shock and, 232, 278-83

- Vasomotor phenomena (*cont.*)
  - sympathectomy and, 177
  - sympathetic vasomotor dilators and, 170
- vasoconstriction
  - renal ischemia and, 232
  - shock and, 281-82
- vasodilatation, 169, 170, 176, 272, 282
  - anesthesia and, 169
  - dorsal root efferents in, 176
  - hemorrhage and, 169
  - shock and, 282
  - in skeletal muscles, 169
  - in sympathectomized limbs, 170
- Veins
  - innervation of, 171
- Venous pressure, 273-78
  - central, 274-77, 310
    - cardiac competence and, 310
    - cardiac output and, 275
    - digitalis and, 275
    - intrathoracic pressure and, 277-78
  - congestive heart failure and, 274
  - effective, 277
  - peripheral, 273-74
    - abdominal compression and, 274
    - intrapulmonary pressure and, 274
  - shock and, 279-80, 307
  - venous return and, 274
- Vision
  - cortical projection area for, 532-33
- Vitamin A
  - absorption of, 217
  - bone growth and, 111
  - bone repair and, 104
  - in plasma, 335
- Vitamin B
  - bone and, 111
  - kidney weight and, 243
  - muscle work output and, 142
  - see also* specific components
- Vitamin C
  - bone and, 111-12
  - bone repair and, 104
  - hemorrhagic shock and, 285
  - wound healing and, 107
- Vitamin D<sub>2</sub>
  - calcification and, 112
  - mineral metabolism and, 112
  - parathyroid glands and, 74
- Vitamin D<sub>3</sub>
  - peptic ulcer and, 207
- Vitamin K
  - dental caries and, 195
  - secretin and, 211
- Vitamin P
  - capillary permeability and, 584
- Vitamins
  - placental permeability and, 583

## W

## Water

## balance

- brain potentials and, 516
- fluid intake and, 422
- temperature and, 422

## deficit of, 386-88

diuresis, *see* Kidney, water diuresis

## evaporation of, 389-91

- ventilation rate and, 389
- water intake and, 389

## excesses of, 383-86

- adrenal gland and, 384, 385
- urine output and, 384

## exchange

- in isolated muscle, 403

## excretion of, 236-41

## extracellular

- determination of, 401, 587
- intestinal obstruction and, 401

## intake, 382-83

- in desert, 382
- diabetes insipidus and, 383
- pancreatectomy and, 383
- at sea, 382
- water balance and, 422

## intestinal absorption of, 217-18, 388

## loss

- in aquatic animals 391

Water (*cont.*)loss (*cont.*)

- epidermis and, 390
- trenchfoot and, 390
- metabolism of, 381-408
  - hypophyseal stalk section and, 397
- permeability and, 581-88
- renal excretion of, 393-96

*see also* Kidney, water diuresis

- requirement during privation, 383, 387
- retention in man, 384

## in tissues, 401

## of total body

- thiourea and, 587

## transudation, 402, 403

- control of, 402
- trauma and, 402
- venous congestion and, 402

## turnover, 381-83

## uptake of, 388, 389

## in uterus

- estrogen and, 401
- progesterone and, 401

*see also* Dehydration

## Water intoxication

- adrenal gland and, 385
- electrical activity of brain and, 385
- pituitrin and, 385
- signs of, 385

## Work output, 154-55

*see also* Muscular exercise

